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A HISTORY OF THE EASTERN FRASER VALLEY
SINCE 1885.

by

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A thesis submitted in partial fulfilment
of the requirements for the degree of
Master of Arts in the Department of History.

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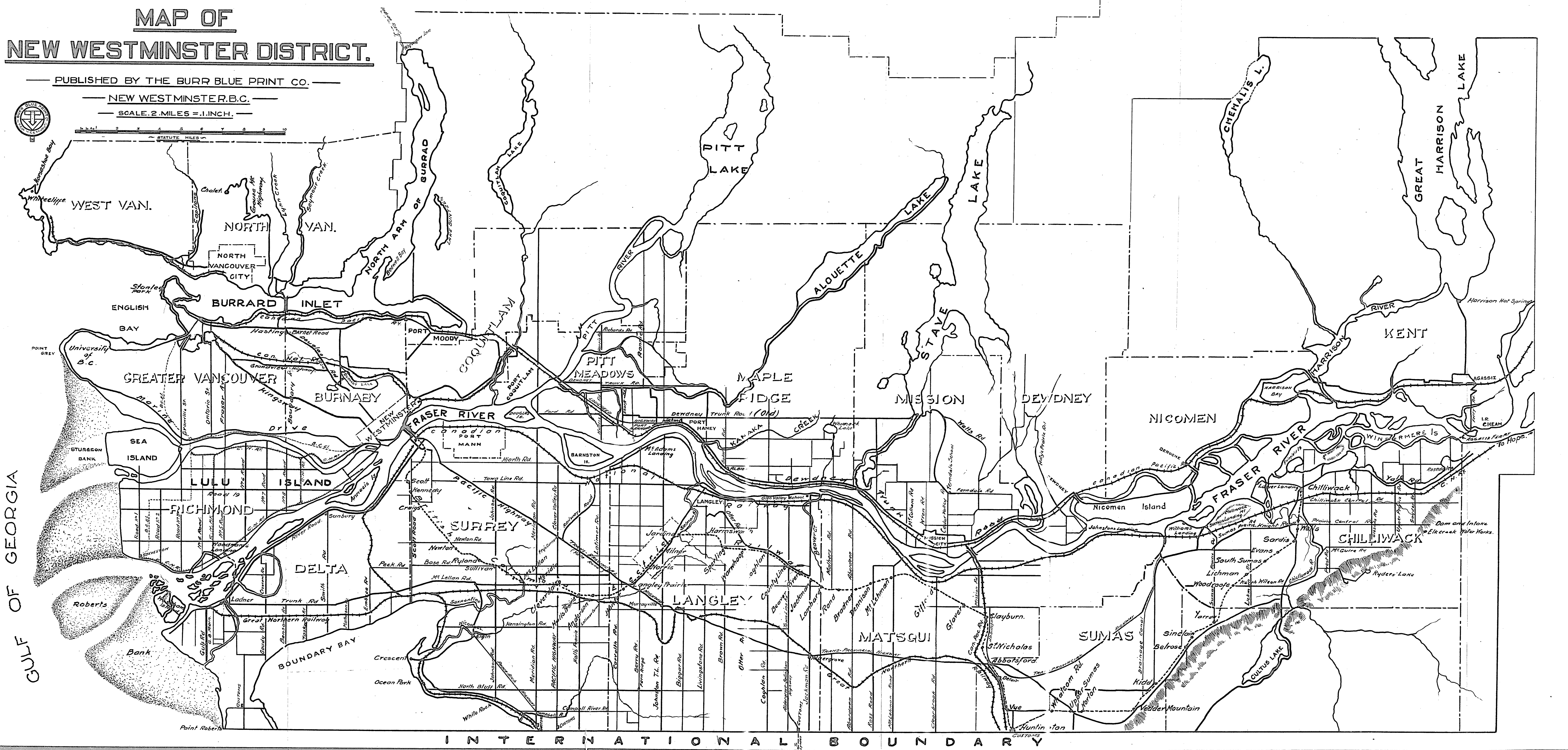
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MAP OF NEW WESTMINSTER DISTRICT.

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A HISTORY OF THE EASTERN FRASER VALLEY SINCE 1885.

Chapter 1

Introduction - A Summary of Events to 1885.

There are few regions more bountifully endowed by nature than that known as the Lower Fraser Valley. Speaking in general terms, it stretches from the mouth of the river eastward to a natural constriction, where lies the town of Hope. The valley then is approximately 90 miles in length, and varies in width from 10 to 25 miles. Here is an area of about 750,000 acres, most of which is richly fertile and suitable for mixed farming. The low-lying lands are composed of fine silt, brought down by the river during the course of countless ages. The higher lands or uplands, extending some distance back of the river on the south side, were originally clothed with a magnificent forest of evergreens and deciduous softwoods. When they have been cleared these uplands also provide agricultural land. The climate of this region is as equable as can be found in the temperate zones, seldom going above 90° in the summer or below zero in the winter. The rainfall averages about 40 inches a year at the mouth of the river (Steveston) and increases to an average of about 60 inches at

the eastern end of the Valley (Hope).¹

Despite these many advantages, it is not to be supposed that nature was so beneficent as not to test thoroughly the mettle of those rugged pioneers who laid the foundations of new settlements nearly three-quarters of a century ago. Every year, during the freshet season, hundreds of acres of land were subject to flooding by the swollen river. During the years of greatest flooding, e.g., in 1894 and 1936, the loss has been serious. Continuous efforts have had to be made to confine the river by dykes. But even at the present time, these efforts cannot be said to have been entirely successful. And, as if to add insult to injury, the floods always brought in their wake, for a few weeks, myriads of mosquitoes -- a nuisance which can try the souls even of the stoutest. But when the major problem of flooding has been overcome, the minor problem of the mosquito will have been largely solved.

In that portion of the valley lying east of New Westminster, which is the area defined in this thesis as the Eastern Fraser Valley, there has been a noteworthy development since the completion of the Canadian Pacific Railway. In order to preserve the continuity of the history of that development, it will be necessary to give a summary of the events which preceded the building of the C. P. R.

Prior to the coming of the white man in 1808, the Fraser Valley was inhabited by numerous tribes of Indians, belonging to the Cowichan group of the Salish linguistic stock. The most powerful of these tribes was the Kwantlen, which occupied

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1. Agricultural Statistics Report, B. C. Department of Agriculture, 1936.

the valley from the north arm of the Fraser, the territory of the Musqueams, to Nicomen Island, where dwelt the Hatzics. The headquarters of the Kwantlen was at Skaiametl, where the city of New Westminster stands today. The life of these early inhabitants must have been comparatively happy and well-ordered, even though it was rudely simple. In the main, too, these people were peaceably disposed, but they suffered from frequent raids by the more savage and war-like Yukeltaws of Seymour Narrows.

Such was the condition of the Indians, when the first known party of white men, led by the intrepid Simon Fraser, came into contact with them in July, 1808. Fraser had successfully overcome the dangers and hardships of the descent of the river which now bears his name. He had reached the mouth of the north arm of the river, and having taken his bearings, had proved that this river was not the legendary Columbia. Fraser would no doubt have liked to continue his work of exploration, but the hostility of the natives was such that he deemed it wise to retrace his steps with all possible speed. He had thus little opportunity to explore the possibilities of the valley, even from the point of view of a fur-trader. Fraser returned to his headquarters at Fort George, and it was to be nearly two decades before a permanent settlement was made in the Fraser Valley.

This settlement was made by the Hudson's Bay Company as a result of a more vigorous policy of expansion, subsequent to amalgamation with the Nor-Westers in 1821. In an endeavour to

control the fur-trade of the Pacific slope, the company sent a party, under the command of James McMillan, to build a post about 35 miles from the mouth of the river. This was named Fort Langley, and thus, in August, 1827, was established the first permanent white settlement in the Fraser Valley. Although the trade in furs proved quite successful for the first few years, the officers of the Hudson's Bay Company were not slow to utilize other resources in order to show a greater profit. Salmon was salted and cured, not only to be used as an additional article of food by the employees of the company, but also for export trade. The agricultural possibilities of the soil did not fail to attract attention, and it was not long before several patches of land near the fort were producing enough food-stuffs to supply the small community.

After 1839, there was a considerable increase in agricultural products at Fort Langley, owing to the fact that the company was paying rental for the lease of the Alaskan "pan-handle" by means of farm produce. The company's farm at Langley Prairie, comprising at one time some 2250 acres, was famous throughout the valley. After the termination of the lease, with trade decreasing and settlement increasing, the policy of the company was, perforce, changed to meet the new conditions. In 1878 this farm was subdivided into parcels of land of varying acreage, and placed on auction.

For political reasons, the Hudson's Bay Company, in 1849, had transferred their headquarters from Fort Vancouver on the Columbia to Fort Victoria. As a result of the settlement of

the Oregon Boundary dispute in 1846, the company was forced to find a new trade route between the interior forts and Victoria. An overland route to Kamloops was found, Forts Yale and Hope were built, and Fort Langley became the point of transshipment for all supplies. From this time on the importance of this historic post began to wane, although for the first few months of 1858 it saw a feverish, if somewhat ephemeral, renewal of activity.

In 1856 gold was discovered in the gravelly bars of the Fraser River and its tributaries. The news spread like wildfire, and early in 1858 thousands of eager miners were making their way up the Fraser River. Fort Langley at first was the head of navigation for steamers, but in June, 1858, the American steamer "Surprise" succeeded, with the aid of an Indian pilot, in reaching Fort Hope. It meant the beginning of the end for Fort Langley.

James Douglas, a chief factor of the Hudson's Bay Company, took immediate steps to cope with the situation created by the arrival of this gold-mad throng. He wished to establish law and order, as well as to safeguard the interests of his company. The Imperial government moved with unwonted promptitude. Some of Douglas' actions were declared "ultra vires", and on August 2, 1858, an act was passed creating the crown colony of British Columbia. On November 19th of the same year, in an historic ceremony at Fort Langley, James Douglas was installed as governor of the colony. At the same time the trading privileges of the Hudson's Bay Company were formally revoked.

Upon the request of Governor Douglas for a military force to maintain order in the mining camps, Sir Edward Bulwer Lytton, British Colonial Secretary, wisely sent out a special detachment of Royal Engineers. The advance guard reached the coast in time to take part in the installation of Governor Douglas. The commander, Colonel R. C. Moody, arrived at Victoria on December 25, 1858, bearing credentials as Commissioner of Lands and Works in the new colony. Douglas, after his installation, had declared old Fort Langley, or Derby, should be the capital of the colony. Lots at this site had actually been sold by public auction at Victoria. Col. Moody, acting under his official instructions, promptly overruled Douglas' choice, and early the next year the present site of New Westminster was chosen as being more suitable. Friction naturally resulted, and relations between Col. Moody and Governor Douglas were not always cordial. This led to the disbanding of the detachment of Royal Engineers in 1863, after they had assisted in the building of the famous Cariboo Road and in other important public works. Most of the rank and file had succumbed to the lure of the West; several took up land near New Westminster, and became honoured pioneers in the land of their adoption.

Among the thousands of adventurers searching for fame and fortune on the sandbars of the Fraser, were many sturdy sons from the farms and towns of eastern Canada and United States. As they made their way up the valley, they could not have failed to notice the agricultural possibilities of the lush meadows and sloping hillsides that stretched on either side of

the river. When the gold-fever had abated somewhat, many of these men returned to pre-empt land in different sections of the valley. The Chilliwack and Sumas valleys attracted several in 1862 and 1863, and it was there, with the exception of the Hudson's Bay Company's farm at Fort Langley, that the first attempts at systematic farming in the Fraser Valley were made. Fruit, vegetables, grain and hay were grown in abundance, and with the introduction of cattle, the dairy products of the Fraser Valley began to establish their present-day reputation.

During the decade following the inception of the crown colony of British Columbia, other settlements were begun in the valley-- at Mud Bay in Surrey, at Mission, at Maple Ridge and at Pitt Meadows. On April 11, 1872, the newly-elected legislature of the province of British Columbia passed The Municipality Act which repealed "The Borough Ordinance, 1865". As a result, Chilliwack and Langley Municipalities were incorporated on April 26, 1873, the first rural municipalities in British Columbia. Maple Ridge was incorporated on September 12, 1874, and Surrey on November 10, 1879. These four municipalities only were incorporated previous to the completion of the Canadian Pacific Railway.

Thus by the year 1885, there were several small but vigorous settlements, most of which were near the river as providing the easiest means of transportation and communication. Gradually also had been established the concomitants of Anglo-Saxon civilization. Schools and churches had been built. Pioneer merchants had laid the foundations of future prosperity in the

E. N. W. 1872

building of small general stores. Postal facilities had been established. Some industrial development had also taken place to exploit the marvellous natural resources. Salmon canneries had been established at several points on the river, and small saw-mills were cutting lumber for local needs. The completion of the Canadian Pacific Railway inaugurated a new era of growth in population and in industrial activity. From that time on the progress of the Fraser Valley has been remarkably steady and consistent. It is of that progress that this thesis will treat.

Chapter II

The Development of Transportation Facilities.

It is axiomatic that the progress of a district such as the Fraser Valley must depend to a great extent on the development of transportation facilities. The comparatively rapid settlement of the valley is due to the fact that modern means of transportation have been available during the last half century. Waterways, of course, offer the easiest means of travel in a new country, and here was a river navigable throughout the length of the valley by the modern river steamer. The construction of the Canadian Pacific Railway gave the settlements on the north side of the river an advantage in transportation facilities for some years, but the railway did not, by any means, displace the services of the river steamer on the north side. For local needs, horsedrawn vehicles were introduced at an early date in the valley, and these have not been entirely displaced even in this modern era of automotive transportation.

Progress, however, since the beginning of the present century has been steady. The building of roads and highways, the construction of railways, and the introduction of the automobile has meant that today no section of the valley is more than two or three hours' journey from the cities of New Westminster and Vancouver. Even the aeroplane has made its appearance. Though not yet established as a public means of travel throughout the valley, several privately-owned machines are in use, and Chilliwack, Fort Langley and Hope have made some efforts at building

air ports. There are few regions today that are better served by modern means of transportation than the Fraser Valley.

River Steamers.

Although sea-going ships frequently came up the river to Fort Langley in the early days of its occupation as a Hudson's Bay post, the real era of the river steamer dates from the time of the Gold Rush. As previously stated, it was then that the first steamer reached Hope. During the Gold Rush and the construction of the Canadian Pacific Railway many a steamer churned her way up the muddy Fraser. As settlement in the valley increased, there was enough steady business for two or three steamers, and this continued till the Fraser Valley Line of the British Columbia Electric Railway was completed in 1910. Passenger traffic on the river steamers practically ceased from that time, although for several years after there was enough freight for one boat. For more than half a century these steamers had served the valley well, but were forced to give way to a speedier and more reliable means of transportation. Nevertheless, the little settlements on or near the river viewed the passing of the sternwheeler with a measure of regret. For them, her arrival and departure was not only a commercial necessity, but was also a social event of some importance. It was a contact with the outside world which satisfied in some measure the gregarious instincts of those who live in lonely places.

The typical river steamer was a sternwheeler, 100 or more feet in length, 20 to 35 feet in beam, of shallow draught and

capable of a speed of about 12 knots an hour. When conditions became stabilized the regular run was from New Westminster to Chilliwack. But in the 90's and earlier, they got business where they could find it, and it wasn't unusual to go as far as Hope if the circumstances warranted it. A service between Chilliwack and Vancouver was at one time given by the S. S. "Hamlin", but it evidently proved an unsatisfactory run for it was not long continued.¹ Smaller steamers were sometimes used to supplement the regular schedule. Such a boat was the "Fairy Queen" which ran between Fort Langley and New Westminster. As the round trip was made in one day, this service was a great convenience for local people and it was well patronized.² But the New Westminster - Chilliwack run was the usual one.

On the trip up river the boat left at 8 a.m. and would arrive about 5 p.m., but this would depend on the number of calls that were made. The boat would tie up over night at Chilliwack Landing, about two miles west of the town, and leave the next morning at 7 a.m. The trip down the river was naturally of shorter duration, New Westminster being usually reached by 2 p.m. There were some thirty-odd regular ports of call on the route, many of them with wharf accommodation. This accommodation, however, was not a necessity. Wherever a white flag was flying the boat would stop. The captain would drive her sharp nose into the mud bank and freight or passengers would

1. Supplement to The Daily Columbian, December, 1903.
2. The Daily Columbian, July 13, 1891.

soon be on board. Service was the important consideration, and nothing was too large or too small. A call would be made for a can of milk or crate of eggs just as readily as for a ton of hay or a shipment of livestock. A crew of a dozen or more husky and skilful deckhands was carried on the boat. The gang plank generally used was not very wide, and if the bank of the river was much above the level of the boat-deck, considerable skill was necessary to navigate the swaying plank. For the passenger the tedium of the journey was always relieved by watching the loading and unloading of freight, particularly if such freight happened to be a refractory animal. But the deckhands were usually equal to the occasion, though it was not an unknown occurrence for a "greenhorn" to get an involuntary ducking in the river. In those days, any husky young fellow looking for work could usually get it on the river steamers, but Indians and half-breeds were generally in the majority.

The first decade of the present century was the hey-day of the sternwheeler, for it was then that a daily service each way was given. The Canadian Pacific Coast Service was then operating the S. S. "Beaver", the namesake of the famous Hudson's Bay Company's steamer. This boat was undoubtedly the finest of a long line of river boats. She had been fabricated in sections in England and put together on the Fraser. In contrast to the usual river steamer, she had a steel hull and drew less than three feet of water. She was 140 feet long, of 36 foot beam and could make 14 knots an hour. She left New Westminster on Mondays, Wednesdays and Fridays, returning the

next day. Her competitor during most of this period was the "Ramona", a smaller, slower boat whose schedule was on alternate days to that of the "Beaver". The "Ramona's" successor was the "Paystreak".

With the completion, in 1910, of the B. C. E. R. valley line, the river steamer was outmoded. The "Beaver" continued to run till about 1914, but within a few months the "Paystreak" was withdrawn from the Chilliwack run, and began a daily round-trip service between New Westminster and Mission.³ Although the fare for a round trip to Chilliwack was the same on the B. C. E. R. as on the boats - \$3 - the river boats handled freight at a considerably lower rate than the railway, which came under the jurisdiction of the Freight Rates Board. For this reason, the boat continued to handle much hay, grain, fruit and cattle, and, for a time, supplies for the construction of the Canadian National Railway.

The last of the sternwheelers to operate on the Fraser was the S. S. "Skeena". She had been built for use on the Stikine River, but had been brought to the Fraser when the "Beaver" was bought by the Provincial government to be used on the Ladner ferry run. The "Skeena" was operated by Captain Charles E. Seymour, one of the best-known figures on the river, with Mr. W. H. Nesbitt as purser. Her regular schedule for years was to Ladner and return on Monday, to Chilliwack on Tuesday returning Thursday, and to Mission and return on Friday. On Capt. Seymour's death in 1928, she was tied up at a New Westminster wharf

3. The Daily Columbian, December 8, 1911.

for some months. The Board of Trade of that city made efforts to have her put again into operation, but to no avail. Although she cost some \$40,000 to build, she was sold for \$1,000 in December, 1928, to Mr. D. Bartlett, manager of Ewen's cannery near New Westminster.⁴ She was dismantled, tied up to the cannery wharf, and for some years served as a bunkhouse for cannery employees. Today her hull only is again in operation on the river, used by one of the oil companies to carry their products.⁵

It is a rather ignoble ending for the last of a long line of well-known river steamers, but there is no place for sentiment in the demands of modern business. Nevertheless, the residents of the Fraser Valley owe a debt of gratitude, alike to the boats and to their officers and crews. They provided a reasonably efficient means of transportation for over a half century, and in times of special stress, particularly during the floods of 1894, they did a magnificent work in rescuing settlers and their live stock, and in removing them to a place of safety. It is not too much to say that the early prosperity of the Fraser Valley depended in a large degree on the services rendered by the ubiquitous sternwheeler.

Ferries.

Bisected as it is by a great river, the Fraser Valley needed some means of communication between its north and south

4. The Chilliwack Progress, December 27, 1928--
reprinted from "The Vancouver Star".
5. Information supplied by Mr. W. H. Nesbitt.

shores. A bridge in the early days was out of the question because of the cost, and therefore ferries were operated as the most useful substitutes.

The earliest of these bore the cryptic name of "K de K", and was operated between New Westminster and Brownsville, just west of the southern end of the present bridge. This ferry afforded a connection with the Yale Road, built in 1875, and was mainly used by the residents of Surrey and the Delta. The service given seemed to have been very unsatisfactory - in fact it was "a mere apology for a ferry".⁶ The route taken was a lengthy diagonal one across and up the river, and the landing accommodations on both sides of the river were so poor that horses and vehicles were seldom carried because of the risk. After months of agitation and protest, the city of New Westminster built a new ferry at a cost of \$25,000. On February 19, 1891, she made her first regular run across the river to South Westminster. The new route was more direct, fares and freight rates were merely nominal, and a dozen teams could be transported easily at one time.⁷ The new ferry, named the "Surrey", was a centre-wheeler, a huge wheel operating between two scow-like hulls. She did duty also as a fire-boat, having powerful pumps which were capable of projecting five large streams of water at one time. Although she was not called on often to fight fire, she more than once demonstrated her usefulness in that respect. The "Surrey", after some years of

6. Editorial, The Daily Columbian, March 14, 1891.

7. Ibid.

service, was taken out of commission upon the completion of the bridge in 1904.

The next point at which a ferry service was maintained was at Mission. The railway bridge there, built by the C. P. R., was not open to vehicular traffic. Accordingly, in the summer of 1911, the government put a ferry into operation, and thus linked the municipalities of Matsqui and Mission. This ferry service was maintained until 1927, when the provincial government, after repeated demands by the residents of the district, had the C. P. R. bridge planked and opened for traffic on July 1, 1927.

Between Chilliwack and Harrison Mills a ferry service was maintained for several years. It was put into operation originally in fulfillment of a contract to carry the mail across the river to the C. P. R. It was maintained for some years by "Old Mac" MacDonald in a canoe. When an occasional traveller sought passage across the river and inquired of "Old Mac" the fare, his reply was, "Four bits, and you pull an oar yourself". But this well-known old character lost his life in an attempted crossing about 1900.

The successor to this canoe ferry was the small ferry steamer "Minto", a stern wheeler about 50 feet in length. It was operated by Captains Jeff Harrison and Bob Menten until July, 1908. Passenger traffic had increased to such an extent that a rival ferry, the "John P. Douglas", was put into operation early in 1908. The owners of this boat bought out the "Minto" which was taken off the run. In the following year the

"John P. Douglas" was burnt, and was replaced by a new boat, the "Vedder". This ferry ran until the B. C. E. R. was completed in October, 1910, when passenger traffic became practically non-existent. The mail contract, however, was maintained by Jack Henley in a small gas-boat until 1914 when the government gave the contract for the mail to the B. C. E. R.

The Rosedale-Agassiz ferry has been in operation for nearly 30 years and is the only one which is still maintained. The popularity of Harrison Hot Springs as a health resort will ensure the retention of this service unless a bridge is built at or near this point on the Fraser.

In the earliest days, a traveller who wished to cross the river at Agassiz would have to take a chance on bribing an Indian to take him across in a canoe. About 1906 the Vallance Bros. inaugurated a ferry service with a rowboat and small scow, the rowboat soon giving way to a small gasoline launch. This service was maintained from 1907 to 1911 by Messrs. Gill and Ryder of Rosedale with an 8 h.p. gas boat and scow. Arrangements for transportation had to be made by telephone, however. The fare was 50 cents when the water was high, but this was reduced to 25 cents during the period of low water. Each passenger in a horse-drawn vehicle was charged the same fare. An automobile with four passengers was charged \$2.50 which is about four times the tariff today.⁸ Service was maintained by private individuals under government contract

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8. The British Columbian, August 22, 1910.

until 1922. At that time the government owned ferry, the "Sea-Wolf" was placed on the run. This boat was 60 feet long and was powered by two 35 h.p. engines. Traffic increased so rapidly that in 1928 a bigger and more powerful boat, the "Eena" superseded the "Sea-Wolf". In 1931 a still larger boat, the "Agassiz", was put on the run, but after 18 months, this ferry was put on the Ladner-Woodward's Landing route. The "Eena" was re-engined with Diesel motors and has been in service steadily since 1932. Since that time it has been operated by Messrs. Henley and Cartmell under a government charter.

It is possible that local ferries might be established at other points on the river. Residents have been agitating for some time for a ferry service between Fort Langley and Maple Ridge and they are hopeful that the government will accede to their request. Ferries will no doubt continue in the future to serve as a link between the north and the south sides of the river, just as they have in the past.

Bridges.

The need for a bridge at New Westminster was recognized for nearly a generation before the scheme was brought to completion. The reasons why the bridge was considered a necessity were concisely stated in a letter sent to Ottawa in 1895 asking for a subsidy of \$100,000.⁹ There it was stated that there was no traffic bridge between the mouth of the river and Spuzzum, 120 miles away; that most of the population was on

9. The Daily Columbian, December 24, 1895.

the south side of the river, while their natural markets of Vancouver and New Westminster were on the north side; that the farmers of the valley suffered undue competition by United States farmers bringing in produce by water; and that the present ferry service was entirely insufficient. The citizens of New Westminster were so impressed with the value and need of improved communication with the other side of the river that they proposed that the city alone should shoulder the great cost of the undertaking. For a decade previous to the construction of the bridge innumerable news items, editorials and letters in the local press reflect the public agitation on the proposal. Nearly every year some new scheme was put forward or some old one modified and revived, but invariably the negotiations came to nought because of financial difficulties.

The project first took definite shape in 1896 with the proposal of Mr. C. H. Wilkinson of London, England. He was the promoter of the White Pass Railway, and was also interested in the Vancouver, Victoria and Eastern (V. V. and E.) Railway. But his proposals for a financial guarantee were not entertained by the provincial legislature and the matter was dropped for the time being. The gradual growth of the city and rural municipalities, coupled with persistent agitation by city and municipal councils, eventually secured for the project recognition as a public utility by the provincial government. But finances were not in a very flourishing condition at the time, and during 1900 and 1901 the province carried on negotiations with the Dominion government, hoping to get a subsidy of 25% of the cost.

Ottawa, however, refused, considering the project purely a provincial one, but was willing to subsidize a private company organized for the purpose.¹⁰ About this time Mr. John Hendry of New Westminster, keenly interested in various railway projects in the province, made propositions to both governments in the name of such a company. But popular sentiment was strongly in favour of construction as a public work; and as such it was finally undertaken by the Dunsmuir government, the necessary finances being taken care of by a loan. Success had at last crowned the efforts of the city and valley. It is true that the city was fortunate in having a friend at court in the person of the Hon. Richard McBride, a highly-popular native son. He had been elected as member for Dewdney, had become for a short time Minister of Mines in the Dunsmuir ministry, and very fittingly was head of the government which completed the project. Nevertheless, the undertaking had the unanimous endorsement of the members of the provincial legislature, and thus was not the product of party politics.¹¹ The same could hardly be said of the new bridge under construction at the present time (1937).

The government wisely decided to spare no expense in the construction of the bridge, which was to be a combined railway and traffic structure of masonry and steel. Mr. J. A. L. Waddell, of the firm of Waddell and Hedrick, Kansas City, Mo., and one of the most eminent bridge engineers on the continent,

10. Gosnell, R.E., "B.C. - Sixty Years of Progress"
Pt. 11, p. 168.

11. Supplement to the Daily Columbian, December, 1903.

was engaged to design and supervise the construction of the bridge. The contract for the sub-structure was given to the firm of Messrs. Armstrong, Morrison and Balfour of Vancouver, while that of the superstructure went to the Dominion Bridge Company of Montreal.

The substructure was begun in August 1902, and gave employment to several hundred men for over a year. The laying of the last stone in the last pier took place on October 24, 1903. The depth of water on the north side presented an exceedingly difficult engineering problem in the building of the piers. This was solved by the use of caissons of timber which were filled with cement and sunk for nearly 40 feet into the river silt. Masonry was then built on top of the cement to the required height. The five piers in shallow water on the south side rest on cedar piles driven 100 feet into the river bed.

The substructure completed, work on the superstructure progressed rapidly. Steel was fabricated in Lachine, Quebec, and brought to the south bank of the river over the tracks of the Great Northern Railway. From thence it was taken up the finished approach to the bridge proper, and placed in position by a huge travelling crane. On November, 11, 1903, the main span, 380 feet in length and weighing 800 tons, was successfully floated into position. In March of the following year the last span - the spread span on the north shore - was placed in position, and the work was virtually complete.

The total cost was slightly over \$1,000,000, but it was a magnificent piece of work, and at that time was considered one

of the best bridges on the continent. There were several novel features in the new structure. The "Y" span at the north end afforded a double railway approach, one from the east and the other from the west. As the main span was 380 feet in width, there was no obstruction to the free passage of tugs and booms of logs. The swing span of 361 feet allowed two passages of 160 feet each for the larger boats. This span is operated by electricity so speedily that very little delay is caused to vehicular traffic. The roadway, including the approaches, is 2850 feet long and 16 feet wide, which at the time was considered "ample to accommodate general traffic."¹²

The amount of material used in the bridge was immense. For the concrete in the piers it was necessary to use over 12,000 barrels of cement, 6000 cubic yards of sand, 1650 cubic yards of gravel and 7800 cubic yards of crushed rock. The cement came from the United States, but the sand and gravel was obtained from Port Kells, and the crushed rock from the Pitt River quarries. Stone for the masonry was brought from Nelson Island, about 70 miles from Vancouver. It required 223 cars to transport the steel from the east. A tremendous amount of lumber, all of the best quality, was used. In the bottom of the piers 1,125,000 lineal feet of fir was used, while 785,000 lineal feet of the same material was used in the trestle approaches. Clear cedar piles - 65,000 lineal feet - were used

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12. Supplement to the Daily Columbian, December, 1903.

in the southern piers and approach, while approximately the same amount was used in cribbing work on the north bank.¹³

On July 23, 1904, the bridge, with appropriate ceremonies, was formally opened to traffic by the lieutenant-governor of the province, Sir Henri Joly de Lotbinière. One of the features of the opening was the procession of river steamers and tugs - about 40 in number - through the draw span. They were loaded with passengers, and each ^{vessel} as it passed through the draw, saluted the bridge with a long blast of the whistle. This procession was repeated at night, this time the boats being gaily decorated with lights and Japanese lanterns.

Tolls were charged for the first few years, but these were removed in March, 1910, by the McBride government. Needless to say, the premier had popular approval for his act.

Benefits of the long-awaited structure to the farmers of the valley were immediate and apparent. In addition, the G.-N. R. which for years had its terminus at South Westminster, then had access to the cities of New Westminster and Vancouver. For the privilege of using the bridge this railway pays an annual rental of \$20,000.¹⁴ In 1910, the B. C. E. R. also made use of the bridge for its Fraser Valley line, and within

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13. From information contained in the Supplement to the Columbian, December, 1903 and in issue of July 23, 1904.

14. Howay, F. W. - A History of B. C. from the Earliest Times, Vol. II, page 529.

a few years the Canadian National trains were using the bridge and the G. N. R. right-of-way into Vancouver.

The general growth of the valley and the increase in traffic have fully justified the construction of the bridge, but few would have been so rash as to foretell the need for a new traffic bridge in 30 years. The development of automobile traffic has been totally unexpected. The passage of two big trucks or buses on the 16 foot roadway is not unattended by danger, while the traffic jams which have occurred on holidays have proved that the present structure is inadequate to carry comfortably the influx of cars on peak days. Accordingly the Pattullo government proposed the construction of a new traffic bridge just west of the present one. A great deal of acrimonious discussion took place as to the wisdom and necessity of a new bridge. Expert engineering opinion differed as to the feasibility of widening the roadway on the present bridge. The government at any rate went forward with its plans, and work on the new bridge was commenced in the summer of 1935. This is to cost approximately \$3,500,000 and should prove adequate for future needs as it is wide enough to carry four lanes of traffic. It is expected to be completed in October, 1937.

There has been a bridge across the Fraser River at Mission since 1892. It was erected by the C. P. R. primarily as a railway bridge in order to connect a branch line with the G. N. R. at Abbotsford. This bridge was a wooden one and stood for about 13 years. It was replaced by another wooden bridge which

lasted a comparatively short time. About 1902 the present steel bridge was erected. Although considerable traffic went through the branch line in the early days, it gradually decreased with the opening up of other lines of communication with the south. Accordingly the residents of the district petitioned for many years to have the bridge planked and thus made accessible for vehicular traffic. In 1927 the government acceded to this request and today this offers an alternative route for traffic, although the approaches to the bridge are not wide enough to permit two cars to pass, nor is the road connecting Mission City and Abbotsford at the present time in very good condition.

Fraser Valley Line of British Columbia Electric Railway.

With the bridge across the Fraser assured it was not long before the residents of the valley asked the provincial government to undertake the construction of a railway or an electric tram line through the valley to Chilliwack.¹⁵ This did not materialize, but later the B. C. E. R. proposed such a railway. In 1906 the municipalities on the south side of the river - Surrey, Langley, Matsqui, Sumas and Chilliwack - passed bylaws which authorized the Vancouver Power Company, a subsidiary of the B. C. E. R., to operate light, heat, power and tramway systems in those municipalities. Shortly after, several survey parties were placed in the field to determine the best route for an electric railway. Plans and estimates were prepared,

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15. The Daily Columbian, September 3, 1903.

and in due course contracts were let for the construction of power lines and of the railway. On August 6, 1907, the first sod in this important project was turned by Mr. R. H. Sperling, general manager of the company, and work on the first section from New Westminster to Cloverdale was immediately begun. This was completed and in operation in about 18 months. Meanwhile the contract for the section from Cloverdale to Abbotsford had been let and work had started. This was completed early in the spring of 1910. The contract for the last section across Sumas prairie to Chilliwack was held up for a time because the route hinged on the much-mooted Sumas Reclamation scheme. A plan presented by F. R. Glover, manager of the company, for the complete reclamation of the Sumas area was turned down by the company's Board of Directors in London, England.¹⁶

The contract for the last section was then let. The right-of-way was projected from Abbotsford to Huntingdon, adjacent to the international boundary line at Sumas, Wash.; from that point it skirted the southern shore of Sumas Lake and continued round the base of Vedder Mountain; thence in a north-easterly direction to Chilliwack. The autumn of 1910 saw the building of stations at Chilliwack and way points.

On October 3, 1910, the inaugural train of three gaily-decorated coaches left New Westminster at 10 a.m., bearing a large party of notables headed by Lieutenant-Governor Paterson and Premier McBride. In addition to B. C. E. R. officials,

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 16. From Government Report of Sumas Dyking Commission, December, 1926.

there were the local representatives of the federal and provincial legislatures, the mayors and aldermen of New Westminster and Vancouver, members of the Boards of Trade of both cities, and publicity commissioners of both. The train crew in charge consisted of the senior men on the interurban lines - Conductor A. B. Clark, Motorman Arthur Brooks and Brakeman Bruce Walker. All along the line the residents turned out to cheer and welcome the train. Stops were made at several points to allow the party time to inspect the company's sub-stations. The train arrived in Chilliwack shortly before 3 p.m., nor was the gaiety of the occasion marred by the fact that, for the last part of the journey, one of the company's steam locomotives had to be requisitioned. A storm the previous evening had caused a tree to fall across the power-lines at Vedder Mountain!

Chilliwack residents, led by a brass band, turned out en masse to meet the train with wild acclaim. The party soon detrained, and Premier McBride, bareheaded, performed the customary ceremony of driving the last spike truly and well. Mayor Munro of Chilliwack then presented Mr. R. H. Sperling of the B. C. E. R. with an address of appreciation and welcome, to which Mr. Sperling suitably replied. The visiting party, along with 150 invited guests, then repaired to the hall of St. Thomas' Church, where a sumptuous repast had been laid. The return journey was begun at 5 p.m., this time under electrical power, the break in the line having been repaired. The long-awaited day of rail communication with the outside world had become a reality. The little city at the eastern terminus of

one of the longest electrical interurban lines in the world hailed it as "the greatest day in the history of Chilliwack."¹⁷

The following day the regular schedule was put into effect with three trains daily each way. Passenger and baggage trains left the terminals at 8 a.m. and 5 p.m. daily, and a special milk train at 7 a.m. The fare charged was \$1.85 for a single, and \$3.00 for a return ticket. The trip at first took three and a half hours, owing to the unballasted section of the road around Vedder Mountain, but this was reduced in a few months to the normal running time of three hours.

The company had announced that it was willing to give a service which would meet conditions, and was not long in giving evidence of its sincerity. There was a heavy freight and passenger traffic on the new line from the very first. Within a month, Mr. Purvis, who had been appointed manager of the interurban lines, acceded to a request from valley farmers for a local train on Friday, which was market-day in New Westminster. This train left Huntingdon at 7 a.m. and returning arrived at 5.30 p.m. In December of that year, a regular freight schedule was put into operation, and, within a few months, an average of 15 carloads of freight were arriving daily in New Westminster.¹⁸ On June 4, 1911, a new schedule went into effect which provided for three passenger trains daily each way in addition to the milk train. The average daily number of passengers carried on

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17. The Chilliwack Progress, October 5, 1910.

18. The British Columbian, March 4, 1911.

the line during the month of May, 1911, was 900, the greatest number being 1500.¹⁹

For nearly two decades the interurban line was an important factor in the transportation facilities of the valley. During that time the Canadian Northern had been built, and had "cut in" to some extent on the traffic. But with improvement in the automobile and highways came the greatest competition to the railways. Just as the railway superseded the river steamer, so has the automobile virtually eclipsed the electric railway. A comparison with former days shows clearly the trend of the times. When the line was completed, the company maintained station agents at six points between the termini - Cloverdale, Langley Prairie, Milner, Abbotsford, Huntingdon and Sardis. Within the last few years these have all been withdrawn with the exception of the agent at Abbotsford. The milk train has continued its schedule, but the passenger-train schedule has been reduced from a maximum of four to three trains daily. Furthermore, where three-car and four-car trains were usual, today one coach only leaves the terminus, and that one is never crowded as the trains of old were. It seems plain that the "march of time" has relegated the electric railway to the background as the chief factor in the valley's transportation systems.

Canadian National Railway.

The orgy of railway building in the pre-war period gave the

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Fraser Valley still another line of communication. Even before the residents of Chilliwack had seen the consummation of their desires in the building of the B. C. E. R., Mr. Mann had announced that progress was being made on the Canadian Northern Railway and that the line between Chilliwack and Vancouver would be in operation in a year's time.²⁰ This might be taken, at least, to reflect the general spirit of optimism which prevailed at the time, even if it does not betray a lack of judgment on Mr. Mann's part. For those were the days of spacious outlook and unbounded enthusiasm, which were not always coupled with sound common sense and good judgment. The plans of the Canadian Northern Railway indicate this. The site for the terminus was to be Port Mann on the south bank of the river about two miles east of New Westminster. Tenders were called in September, 1910, for clearing the 2000 acre tract for the townsite, and lots there were soon selling at inflated prices. Extravagant claims were made as to the ultimate importance of this "Liverpool of the Pacific". A Vancouver newspaper, strangely enough, prophesied that it was "soon to become a serious rival to the growth of Vancouver".²¹ A magazine article later claimed that "the opinion expressed by many experts that Port Mann will rapidly become one of the largest cities on the Coast seems to be amply justified".²² But these dreams were never even remotely realized. The logical decision to extend

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20. The Daily Columbian, June 13, 1910.

21. Industrial Supplement to the Vancouver World, Sept. 21, 1910.

22. The British Columbia Magazine, March, 1912.

the line to tidewater at Vancouver would have caused the collapse of the original plans, even if the pre-war depression hadn't ended them. Anyone viewing Port Mann today would find it difficult to justify the boom-talk which was evidenced in 1910 and 1911.

Moreover the actual construction of the railway did not keep pace with the estimated rate. Bad weather during the winter months and difficulty in getting supplies caused delays. It was not till May 24, 1915 that a tri-weekly local service between Hope and Port Mann was inaugurated.²³ Trains going east left on Monday, Wednesday and Friday and returned the next day. The subsequent consolidation of the line as part of the Canadian National Railways has given a regular service to some of the older settlements near the river, which the right-of-way follows rather closely. At the present time there is a bi-weekly local train between Vancouver and Boston Bar. The C. N. R., being a transcontinental line, has not had to depend on local traffic as does the B. C. E. R., but it suffers to-day from the same competition of motor buses and trucks.

Great Northern Railway.

The G. N. R., because it is a connecting link between the Lower Mainland and the United States, has played an important part in the development of the Fraser Valley.

It has had an interesting history. The first section to

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23. The Chilliwack Progress, May 27, 1915.

be built was between South Westminster and Blaine. It was chartered as the New Westminster Southern Railway, and was one of the first railways in the province constructed after the C. P. R. The promoters were a group of very enterprising business and professional men of New Westminster. The first charter for the road was granted in 1883, but owing to financial difficulties this was allowed to lapse. The idea was then sponsored by the Board of Trade of New Westminster, and an application for a charter in 1887 was granted by the provincial legislature. This was turned over in 1888 to a directorate composed of those men who had bought stock.²⁴ But preliminary plans were beset with many obstacles, financial and otherwise. Under the charter of the C. P. R. no railway was allowed to run south of its line to connect with an American system. This difficulty was removed as a result of agitation in Manitoba over the same monopoly clause. Financial difficulties which threatened at first, were also overcome and the road successfully completed. It is one of the very few railways which did not receive a grant of some sort of government assistance.²⁵

The road was opened in 1891, and the usual opening ceremonies took the novel form of a railway "wedding". Trains left South Westminster and Blaine so as to arrive at the boundary line at the same time. They approached each other until only a yard or so separated them, and the presidents of both

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24. The Daily Columbian, February 14, 1891.

25. Howay, F. W., op. cit., Vol. II., p.449.

the New Westminster Southern and the American line together laid the last rail and drove the last spikes at the actual boundary.²⁶

A tri-weekly service was begun and was operated for many years in connection with the ferry at New Westminster. When the bridge was built, this line was amalgamated with the V. W. & Y. line which had been built between New Westminster and Vancouver, and thus became part of the G. N. R. system.²⁷

The original line passed through Port Kells and Cloverdale, but in 1908 a new line was laid along the sea-shore. This is the line in operation today, and it has assisted in the development of the sea-side resorts on Semiahmoo Bay, as well as in maintaining rail communication with the cities of the Pacific states.

Roads and Highways.

Both the north and the south sides of the valley are served today by splendid highways - the former by the Lougheed Highway, and the latter by the Yale Road and Pacific Highway. There are also several important "feeders" and connecting roads - the Scott, McLellan, and Townline Roads on the south side, and the old Dewdney Trunk Road on the north side. In addition there are hundreds of miles of gravel roads.

In the first half of the period under review, there seems to have been little systematic planning for road-building.

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26. The Daily Columbian, February 14, 1891.

27. Gosnell, R. E., op. cit., pages 167, 168.

Often roads were merely evolved from foot and pack trails into earth roads as settlement demanded, and consequently did not follow the best or shortest route. Financial arrangements too were haphazard. Funds for roads were allocated to electoral districts, each of which was in charge of a superintendent.²⁸ These in turn employed resident settlers to do any necessary work, which seemed to consist mainly in dumping gravel at the worst spots. During the last decade of the nineteenth century, letters and editorials in the valley newspapers complain with a good deal of asperity about the condition even of the Yale Road during the winter months. In certain stretches across the Langley Prairie it was characterized as "an impassable ditch... ..an example of sheer neglect".²⁹ It is not difficult, then, to imagine the state of the "feeder" roads during the wet weather.

About 1908, however, owing to the use of automobiles, the Department of Public Works began a systematic construction of trunk roads suited to motor traffic. At this time the province was in a fairly prosperous condition. For several years Sir Richard McBride's government had actually produced surpluses. This prosperity was reflected in the road-building program which was initiated. A review of conditions in 1910 states that "more work is being done on the roads of the valley this year than ever before".³⁰ Many miles of new road were built in

28. Manual of Provincial Information, 1930, p.204.

29. The Daily Columbian, December 26, 1890.

30. Ibid, July 26, 1910.

the municipalities that year, and in addition many more miles were widened, graded, gravelled and otherwise improved. As an example of the work done, the government spent in Dewdney alone \$100,000 for roads and \$35,437 for bridges.³¹ The incorporated municipalities had to bear naturally a greater proportion of the costs. During the next year or two, work continued apace. It was at this time that the present route of the Pacific Highway through Surrey was located, and on August 1, 1911 the new section of the road from Fry's Corner to the international boundary line was opened for traffic.

As a result of the policy of retrenchment during the war years, very little more work than necessary repairs was done on the roads. Motor traffic, however, was increasing rapidly, and to cope with the problem of good roads the Department of Public Works effected a radical change in organization. The province was divided into eight districts with a permanent staff in each which consisted of a district engineer, assistants, and general foremen. These were augmented during the season by local foremen and gangs of labourers engaged on a daily-wage basis.

During the post-war period, improvement of the main arteries of traffic has been fairly steady. In 1924 a decision was made to use the Yale Road and the Fraser Canyon route for the trans-provincial highway. Increasing motor traffic made permanent, hard-surfaced roads a necessity. Although the cost of road-building in B. C. has always been high compared with that of other provinces, improved machinery and scientific methods have

31. The Daily Columbian, July 26, 1910.

put the main highways today in splendid condition.

The improvement to the Yale Road has been carried on over several years. As a result of the completion of the Sumas Reclamation Scheme, the hilly and dangerous section of the road over Vedder Mountain was eliminated by the construction of a road across Sumas Prairie. In 1928 a new road across the prairie was surveyed and located. This took a more direct route between the Vedder Drainage Canal and Abbotsford and effected a saving of nearly five miles. Within the next year or two a section of several miles from Vedder Canal to Chilliwack was paved with concrete. Other sections were widened, straightened and hard-surfaced. The last section to be so treated was the new road across the prairie. This was completed during the summer of 1935. The Yale Road is now paved or hard-surfaced as far as Rosedale, about seven miles east of Chilliwack.

For many years the main road on the north side of the river was the Dewdney Trunk Road. This linked up New Westminster and Dewdney. Although traffic on the north side has never been as heavy as that on the south side, agitation for improvement has been constant. As a result the Hon. N. S. Lougheed, Minister of Public Works in the Tolmie government, announced in 1928 a modern road for the north side. The section between Port Coquitlam and Port Haney was to be entirely relocated.³² Construction of this road, now known as the Lougheed Highway, has been carried on since that announcement. It is now hard-surfaced

32. The British Columbian, December 5, 1928.

as far as Deroche, 13 miles east of Mission City, and is a good match for the Yale Road. From the part of the highway between Deroche and Agassiz one can obtain a magnificent view of the river and valley. With the increasing popularity of the Harrison Hot Springs Hotel, the eventual hard-surfacing of this section seems assured. When that is done, the round trip up one side and down on the other should prove highly popular to those who are unacquainted with the beauty and resources of the Fraser Valley.

Automotive Transportation.

The continuous improvement and increasing use of the automobile has revolutionized the commercial, economic and even the social life of the residents of the valley. In the early days of the century, it was probably an all-day task for the farmer to take a load of grain, hay, or fruit to the river landing for the steamer to deliver to the city markets. The electric and steam railways cut that time to two or three hours, and thereby improved the economic position of the farmer. But that time today would enable a truck to reach the cities, even if it came from the eastern end of the valley. Quick delivery is an advantage to the producer as well as to the consumer of dairy products and farm produce. And today it is no uncommon occurrence for residents of the valley, even as far east as Chilliwack, to come to Vancouver in an evening to enjoy an outstanding cultural or dramatic presentation or a sporting event. It means that rural residents can enjoy today urban advantages that were undreamed of even a quarter century ago.

Indicative not only of the motor-car of an earlier generation but also of the condition of the roads is this news item published in the Chilliwack Progress of November 2, 1910, under the caption of "Fast Motor Driving."

H. Hooper of Vancouver...made a record trip from this city to Abbotsford yesterday.... He made the trip in two hours and 10 minutes. This time is authentic, it being telegraphed back to Chilliwack on his arrival at Abbotsford. The trip is a most remarkable one considering the state of the roads....Across the Sumas Prairie, in places, the axle of the car dragged through the mud and the water.

Such a trip could easily be made today in less than half an hour!

The increase in the number of motor-cars in the last few years has been almost incredible. The registration and licensing of motor-cars in B. C. began in 1907, when 175 were registered. By 1909 these had increased to 504. But the next two decades showed an amazing growth. In 1919 the number was 21,350, while in 1930, the year of highest registration, licences were issued to 98,938 motor-vehicles.³³ At a conservative estimate, at least two-thirds of these vehicles are registered in the towns and cities of the Lower Mainland.

Keeping pace with the number of privately-owned cars was the number of commercial vehicles. The B. C. E. R., through its subsidiary, the B. C. Motor Transportation Co., was early in the field of automotive transportation. In May, 1926, they inaugurated the Rapid Transit service to Chilliwack with two

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33. Canada Year Book, 1937.

especially-built, 28-passenger Pageol coaches. At that time four round trips per day were made, but that schedule has been reduced at present (1936) to three. Preliminary to inaugurating this service the company had purchased the stage line of G. L. Hamre, which had been operated between New Westminster and Abbotsford. The company also bought out the freight line of H. A. Thornton, which was operated on the same route, and established the Fraser Valley Freight Line.³⁴ The B. C. E. R. evidently decided that if there was to be competition to the electric line, they would provide it themselves. This they have succeeded in doing as far as passenger service is concerned, but in the freight trucking service they have always had several competitors.

The number and mechanical excellence of motor vehicles will likely continue to increase. There does not appear to be any serious rival to the dominant position such vehicles now hold in the field of transportation.

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34. The British Columbian, April 27, 1926.

Chapter 111

The Development of Agriculture

It was the agricultural possibilities of the Fraser Valley which first attracted permanent settlers there; it has been the increasing development of these possibilities which has laid the foundation for the prosperity of the valley. An equable climate and fertile soil provided initial advantages of which the pioneers were not slow to take advantage. In the course of time the growth of two cities at the front door of the valley provided the farmers with an excellent opportunity for the sale of agricultural products, but wider markets have been by no means neglected.

Settlers in the valley, however, have had to face certain handicaps and disadvantages. Compared with other districts in Western Canada, the price of land has been high; the cost of clearing land, too, is excessive. For these reasons an initial outlay of considerable capital was almost a necessity. Products have had to compete in most cases with those of the older and more fully-developed states of the Pacific Coast. Certain of the low-lying, and therefore richest, sections of the valley have had to be dyked to prevent the ravages wrought by the river during the annual freshets.

During a tour of the valley today, however, one is impressed by its fundamental prosperity. Modern, substantial homes, barns and silos are to be seen on every hand. Lush pastures provide sustenance for pure-bred herds of cattle, flocks of sheep and

droves of swine. Well-cultivated fields, orchards and nurseries are unmistakeable evidence of careful attention to the science of agriculture. It is not without reason that the valley has become one of the richest and most productive farming areas of Canada.

Floods and Dyking.¹

The annual freshet of the Fraser, with its attendant destruction, has always been a major problem for the Fraser Valley farmer. In the early settlement this problem was aggravated by the fact that the date, as well as the maximum height, of the freshet has been uncertain. Weather conditions in the upper reaches of the Fraser during the winter and spring months are the main determining factors for these uncertainties. In 1876, after more than a decade of settlement, the highest freshet then on record occurred about the beginning of July. In 1882 this height was surpassed about the middle of June by 13 inches as measured on the gauge at Mission City, the standard for measuring the height of flood waters.

In 1894 occurred the greatest flood that has ever been recorded in the valley. Induced by a very hot spell in the interior, the waters began to rise on May 19th, and thereafter rose at an average rate of two feet per day, reaching the maximum height on June 6. On this date, the water at Mission at high tide reached a height nearly three and one-half feet above the record of 1882. During this flood period at least eight lives

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1. Information in this section was largely obtained from the report of the Special Dyking Commission, 1934, and from Mr. Bruce Dixon.

were lost, and tremendous devastation occurred to crops, live-stock, dykes, bridges and roads. The right-of-way and telegraph lines of the C. P. R. were damaged to such an extent that communication with the East by these means was interrupted for several days. Sumas Prairie was flooded to a height of over 15 feet. River steamers, which did valiant service in rescuing settlers and live-stock, found no difficulty in steaming from Chilliwack to Huntingdon. The waters receded slowly and there were very few farmers who found it possible to sow second crops that year. Assistance was freely given to the residents of the stricken valley from private as well as governmental sources, but it took considerable time to repair the ravages of the "Big Flood".

Lulled into false security by the hope and belief that high water only came once in a decade or so, the settlers were caught unprepared by the freshet of 1896. In that year the maximum height of the flood did not quite reach that of 1882, and it was somewhat later than usual, the maximum being reached on July 16. It did demonstrate very convincingly, however, the necessity for a comprehensive system of dykes and drainage if the crops on the low-lying lands were to be secure from annual devastation. During the succeeding years many miles of dykes have been constructed, and these have given reasonably good protection to important low-lying sections.

Not until the summer of 1936 did these dykes undergo a very severe testing. In that year the height of the flood was exceeded only by that of 1894. A sudden heat wave in the in-

terior of the province during the last week in May resulted in an abnormal run-off of water. With the advantage of frequent reports from the upper country, the Dominion Water Power and Hydrometric Bureau at Vancouver was able to forewarn the Department of Dykes, which in turn was able to pass on the warning to residents of the valley. During the first week in June, the waters rose until a mark of 22.61 feet was registered on the Mission gauge on June 9th. This was still considerably under the all-time high mark of 25.75 feet, registered in 1894. Owing to the warning, the main dykes were maintained intact by department officials and volunteer workers. Considerable damage resulted, however, from breaks at Agassiz, where about 5000 acres were flooded, and at Dewdney, where about 2000 acres suffered from inundation. Several small private dykes gave way under the strain. In the main, the dykes proved that they were sufficiently strong to withstand the freshets of all but those of extraordinary years. With further strengthening of the dykes at strategic points, there is reason to hope that the farmers of the valley may be assured, in the future, of reasonable security against the ravages of flood waters.

Before the present system of dykes was constructed, there were several low-lying sections of the valley which were always subject to flooding during the freshet season.² The first of these, from the eastern end of the valley, was the flats at Agassiz, comprising an area of nearly 5500 acres. The next

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2. Gosnell, R. E., B. C. Year Book, 1897,
p. 276 et seq.

point of danger was at Chilliwack, where nearly 22,000 acres were subject to flooding, but only during the highest freshets. The third area was that of Sumas Prairie, comprising almost 30,000 acres, nearly all of which was subject to flooding every year. Next was Nicomen Island, a comparatively small area. A little further west, at Dewdney, there was an area of over 5000 acres that suffered; while across the river, on the south side, were the Matsqui flats, comprising 10,000 acres. The most westerly danger point was the Pitt River Flats, an area of over 8500 acres, lying in the eastern angle formed by the confluence of the Pitt and Fraser Rivers.

Since 1894, all of these areas, and others as well, have been protected by the construction of about 120 miles of dykes. Only 15 miles, or about 12½%, of the total have been financed without government assistance.³ The cost of the construction and maintenance of these dyking areas has been a serious financial drain on the government and on the valley farmers.

The first money for dyking purposes was authorized by the provincial legislature in the Acts of 1894 and 1897. The Act of 1898 established the capital indebtedness of each area and provided for the payment of annual assessments by each district. In that year also the first Inspector of Dykes was appointed. Minor adjustments to the Act were made in succeeding years, all of which were consolidated in the Dyking Assessments Adjustment Act, 1905. This act cancelled the total charges

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3. Report of Special Dyking Commission, 1934, p.4.

against each district, established new and reduced charges in their stead, and provided for the repayment of those reduced capital charges to the government in 40 years by the collection of annual assessments.⁴ Provision was also made for the cost of maintenance to be advanced by the Minister of Finance. In 1912, when a considerable number of renewals and replacements of equipment had to be undertaken, an amendment to the section dealing with maintenance made it possible for the Minister of Finance, with the approval of the Lieutenant-Governor-in-Council, to advance monies for such work of an extensive character and to extend repayment over a term of years at 5%. Though really capital in nature, these advances are treated as deferred maintenance accounts, and annuities thereon each year are included in the maintenance levy.

The years of the depression following 1929 placed a heavy burden on the farming interests, and yielding to considerable pressure, the provincial legislature in 1933 postponed the annual payments on all capital accounts, carrying the insufficiency over to the end of the redemption period. This postponement has been continued each year since.

In 1934, a Special Dyking Commission was authorized by the Hon. A. Wells Gray, Minister of Lands. This commission was instructed to make a thorough survey of the problems of each district and to present their recommendations. In all, 16 districts made representations to the commission, and each

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4. Report of Special Dyking Commission, 1934.
p. 2 et seq.

asked for a reduction in assessments. The commissioners felt, however, that the districts were able to carry the charges, but recommended leniency in the collection of assessments until the price of dairy products had improved.⁵ As most of the reclaimed land was useful for dairying, the commissioners felt that the slump in prices during the depression was the crux of the whole matter.

For the purposes of administration, the provincial government recognizes three different classes of dyking and drainage districts.⁶ Those of the first class have been assisted by the government as to both capital expenditure and maintenance. In this class are the dyking districts of Coquitlam, Maple Ridge, Pitt Meadows #1, Pitt Meadows #2, and Matsqui. The second class of districts, for which the government has advanced funds for capital expenditure only includes Chilliwack, Dewdney, Sumas, Matsqui Drainage #1, and Maple Ridge Drainage #2. In the districts of these first two classes, the cost of maintenance is borne entirely by landowners, but they are under the administration of the Department of Dykes.

The third class of districts in which, generally speaking, the government has no financial interest includes West Langley, Agassiz, South Westminster, North Pitt Meadows, Surrey and West Nicomen. The last two districts are exceptions inasmuch as the government is financially interested in both. A loan was made to Surrey in 1922 through the Land Settlement Board, of which

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5. Report of Special Dyking Commission, 1934,
p. 121 et seq.

6. Ibid, p.1.

\$16,000 still remained outstanding in 1934. In the district of West Nicomen, the government guaranteed a bond issue of \$87,000 in 1918.

The onerous duties in connection with the administration of dyking areas falls on the shoulders of the Inspector of Dykes. Although a government appointee, he is primarily responsible to the landowners themselves and always acts in close co-operation with committees set up by the ratepayers of each district. Not only does he set and collect the assessments from each district, but he also is concerned with the dyking and drainage of the lands under his jurisdiction. Since 1921, these duties have been very capably discharged by Mr. Bruce Dixon, C. E. Mr. Dixon has his office in the Courthouse at New Westminster, in order to be near the scene of his activities. He acted as chairman of the Special Dyking Commission, 1934.

The construction of the many miles of dykes in the valley has presented many engineering and financial problems, but it has meant the reclamation of nearly 150 square miles of land that was suitable for intensive cultivation or for dairying.

Following the order of east to west in the most serious danger points, we find that the northern half of the Agassiz flats was dyked in 1885 when the C. P. R. embankment was constructed. In 1920, an area of some 1300 acres known as Hammersley Prairie was reclaimed as a real estate venture. A part of the C. P. R. grade was used as a dyke with a small spur dyke filling the gap between the railway and Kent Mountain. This

dyke, in which a flood-box was constructed, crosses a slough which forms a natural drainage for the area. This particular tract of land has never been constituted as a dyking area, the reclamation being apparently for the purpose of making the land more saleable.

The Chilliwack district stands in a class by itself from an economic point of view. The floods of 1876 and 1882 had shown the dangers of flooding, but no dyke was started till 1898. This dyke was completed in 1903 at a cost of nearly \$300,000. However, there were no great areas of waste land, and the number of acres to be reclaimed (about 20,000), in proportion to the cost of reclamation, made the project an economically sound one from the beginning. The cost of the whole scheme was approximately \$15 per acre. By the Act of 1905, this was reduced to \$10 an acre. This district has been so favoured by nature that the dyking assessments have never been burdensome. In 1918 the administration of the district was transferred from the Inspector of Dykes to the municipality itself.

The work which was done to protect the 30,000 acres on Sumas Prairie has culminated in the Sumas Dyking Scheme. As a project of major importance, a subsequent chapter has been devoted to it.⁷

The West Nicomen District, which includes the island of Nicomen, was unreclaimed for some years owing to the great

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7. See Chapter V, p.100.

cost. In 1911 the district was organized under a board of commissioners, and the contract for construction of a dyke was let in December 1912. The commissioners found it necessary to take over an uncompleted job from the contractors, finally finishing it in 1915 at a cost of \$95,000, toward which the government had made a grant of \$10,000. The commissioners had the usual difficulties, and in 1917 the government placed the administration in the hands of the Land Settlement Board. In October 1930, the administration was transferred to the Inspector of Dykes. At that time the construction of a new highway provided the district with a practically new dyke. As the soil in this district is extremely porous, seepage and erosion of the river banks are constant threats to be guarded against.

The Dewdney district, like that of Agassiz, was divided by the C. P. R. embankment. The northern half, which includes Hatzic Prairie, was reclaimed in 1893 by using the right-of-way of the railway and putting in a flood-gate at Hatzic Slough. This was washed out in 1894. Nothing further was done until 1909 when, as a result of private enterprise, the district was organized under a board of commissioners. Information as to the actual cost of the work proposed is lacking, but litigation and other expenses involved the district in a total final cost of over \$200,000. The result has been that the government has had to come to the assistance of the district at various times, and in April 1929, the Inspector of Dykes took over the administration of affairs. The lands of this district may be classified as among the better lands of the valley, practically

all of it being ideal for dairying and a considerable portion of it being suitable for intensive cultivation. In the freshet of 1936, the slough road gave way under the pressure of flood waters, and nearly 2000 acres lying outside of the C. P. R. embankment were flooded, causing considerable damage.

On the south side of the river, opposite Mission City, lies the fertile Matsqui Prairie, an area of over 10,000 acres. The reclamation of this section of the valley seems to have been among the first to have been seriously considered. In 1878, as records show, the legislature gave Ellis Luther Derby authority to reclaim certain lands in this district, and in return he obtained a grant of some 6,000 acres of land. This project met with failure as a result of the flood of 1882. It was brought to the fore again after the summer of 1894, and in 1896 the district was organized under a board of commissioners. The failure of the dyke in 1896 led to the construction of a new one at an estimated cost of \$106,000. Some 4000 acres in this district have been organized since 1919 into a Drainage District, as natural drainage there was interfered with by the construction of dykes. Maintenance costs in this district have always been heavy owing to the necessity of providing pumping apparatus to carry off water not only during the freshet season, but also during the months of heaviest precipitation.

In the early days all the lands constituting the flood-plain through which the Pitt River flowed were known as the Pitt River Meadows. Gradually, with the development and organization of this region, different areas became grouped under

distinctive names. In chronological order, the dyking areas of Maple Ridge, Coquitlam, Pitt Meadows #1, and Pitt Meadows #2 were organized. These four districts have had almost identical experiences, both physical and financial, in connection with their dyking projects. Original construction costs, as well as maintenance costs, have been high. At the present time there is a total of 34.34 miles of dykes in these districts,⁸ and they have assisted materially in the reclamation of valuable farming lands. Proximity to city markets give them an advantageous position. It is unfortunate that the recent depression years have interfered with what promised to be a healthy development in this section of the valley.

A unique problem in dyking and drainage has been faced by the municipality of Surrey, since its organization as a dyking district in 1911. It was not the river waters but tidal waters which caused the flooding of low-lying lands. Dams had to be constructed across the Nicomekl and Serpentine Rivers at the Elgin Road in order to prevent destruction. These dams are fitted with flood-gates which were designed to operate automatically with the tides. They have proved very satisfactory unless there are extremely high tides and winds. Such a conjunction of the elements occurred in the winter of 1933, and as a result waves washed over the road which served as a dyke. This municipality has an additional problem because much of it serves as a natural sump for a surrounding area of approximately

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8. Report of Special Dyking Commission, 1934,
pp. 6, 13, 18, 22.

100 square miles. As a result of continuous clearing of forested areas on the up-lying lands, the run-off of water has been considerably accelerated. This formerly took five or six days, but today it takes only a few hours. The rivers can no longer comfortably carry away the run-off water and the resultant silting-up of the beds of the Nicomekl and Serpentine Rivers necessitates considerable dredging. In addition, water remains for a considerable portion of the year on low-lying land such as that at Fry's Corner. A problem has been created which will require special consideration in the near future.

Fruit-Growing.

For many years the growing of fruit was the most important phase of agricultural industry in the Fraser Valley. The varieties of fruits grown in north temperate climatic regions could be easily grown there. Exhibitions of British Columbia fruit in the United States, Great Britain and eastern Canadian provinces attracted general attention because of the size, colour and quality.

Pioneer growers, nevertheless, faced certain difficulties. Lack of shipping and transportation facilities, the cost of clearing and reclaiming land, and the lack of good markets were serious handicaps. Because of these conditions in the early days, much fruit was left to rot on the ground. But with improvement of conditions and extension of the industry came also a rapid increase in fruit pests and fungous diseases, which seemed to thrive particularly well in the damp Coast climate. Only the vigilance of the Horticultural Branch of the provincial

Department of Agriculture prevented the development of a serious situation.

The Department of Agriculture can be credited very largely with the expansion of agriculture in the valley. This department was first organized in 1890 with the Hon. J. H. Turner as the first cabinet minister.⁹ To him goes a great deal of credit for generous aid in educational and co-operative work. The organization of Fruit Growers' Associations and Farmers' Institutes was a feature of his regime. During 1905 - 1909, with Capt. Tatlow as minister, the policy and work of the department was altered, and more attention was given to making commercial exhibitions of fruit and in pressing for better freight rates. In 1909 the department was reorganized into branches, each of which was placed under the supervision of qualified experts. This policy has been continued and further developed under succeeding ministers, particularly under W. J. Bowser, Price Ellison and E. D. Barrow.

The prairies early proved to be a natural market for British Columbia fruit, and the settlement of the prairie provinces greatly stimulated the fruit-growing industry. Shortly after the completion of the Canadian Pacific Railway small shipments of fruit from the Fraser Valley were made to Winnipeg, but it was not until the 1890's that regular shipments of fruit were made by express.¹⁰ These shipments increased steadily. In

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9. Gosnell, R. E., B. C. Year Book, 1911/1914, p.233

10. Ibid, p.235.

1904 the shipments of fruit from Fraser Valley points through the Canadian Pacific Railway were as follows:¹¹

<u>Office</u>	<u>No. of packages</u>	<u>Weight</u>
Abbotsford	439	11,198 lbs.
Agassiz	117	1,674 lbs.
Chilliwack	6,363	134,842 lbs.
Hammond	12,619	299,336 lbs.
Haney	3,116	72,789 lbs.
Mission	13,576	333,876 lbs.
Westminster		
Junction	464	11,935 lbs.

It has been impossible to follow these statistics in subsequent years, for the figures since 1912 include vegetables with fruit.

The development of the fruit-growing industry in the Lower Mainland during the last quarter century is indicated by the following figures, showing cars of fruit produced in 1913 and in 1935. (1913) is the earliest year in which comparable figures are given. 1935 has been taken rather than 1936, as weather conditions in the latter year were responsible for very poor yield of small fruits.)

Cars of Fruit Produced in Lower Mainland 1913 and 1935.¹²

	<u>1913</u>	<u>1935</u>
Apples	17.0 cars	89.8 cars
Cherries	2.9 cars	7.3 cars
Pears	2.9 cars	7.5 cars
Plums and Prunes	13.3 cars	63.8 cars
Strawberries	11.7 cars	440.4 cars
Raspberries	30.1 cars	94.8 cars
Blackberries	13.0 cars	30.4 cars
Loganberries)		46.5 cars
Bush-fruits)	2.4 cars	22.4 cars

Basis - Minimum weight per car: Apples and pears, 15 tons
balance, 10 tons

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11. Pamphlet: "Land and Agriculture in British Columbia", 1904, p. 45.

12. Pamphlets: Agricultural Statistics, 1914, Victoria, p.30
Ibid, 1935, p.16.

With the development of the Okanagan Valley as an apple-producing region, the fruit-growers of the Fraser Valley have ceased to be particularly interested in that phase of horticulture. Although a good deal of experimental work was done in the early days in regard to most suitable varieties, it was soon apparent that apples from the interior valleys of British Columbia surpassed those grown at the coast in size, colouring and flavour. As a result many of the older orchards have been neglected.

The trend in horticulture has been towards a high degree of specialization as certain districts were proved to be especially adapted for growing certain kinds of fruits. With a strongly competitive market the aim has been to eliminate varieties which were failures and to improve existing varieties. As a result of this policy, the Chilliwack district is specializing in cherries while the bench lands of Mission and Maple Ridge are well-adapted to the growing of strawberries and raspberries. A southern exposure and light, well-drained soil give to these latter districts the distinct advantage of being able to market their crops at least a week earlier than other sections of the valley. The old adage about the early bird getting the worm applies particularly to the grower of strawberries.

The cultivation of the strawberry plant in the Fraser Valley began about 1880, but these were mainly for domestic consumption. When it was discovered that it was possible to ship to the prairie market, several varieties were tried out.

The Magoon soon proved its superiority as a shipper, and continued the favourite for some time. During the last few years, it has been superseded by a new variety, the British Sovereign. The latter has become very popular owing to its superior flavour, and it is quite the equal of the Magoon as a shipper.

During the war, the price of strawberries rose to the unheard-of figure of 20¢ a pound. The resultant increase of acreage planted to strawberries during the post-war period was noticeable. But the law of supply and demand soon brought the price down, and the average price during recent years has only been about one-third of the peak price. Within the last decade increasing markets, improved shipping facilities, and co-operative marketing have tended to increase the acreage.

The latest development in marketing has been the discovery of a special process for preserving berries. This has resulted in heavy shipments of processed berries in barrels to the jam factories of the British Isles. In this process, the berries are treated to a solution of sulphur dioxide gas (SO_2), calcium powder being added to harden the berries. One gallon of solution to two gallons of water are used in a barrel containing 350 pounds of berries. No longer does the grower suffer from the vagaries of local canners, when he has to dispose of surplus berries. In 1935, a good crop year, approximately 50% of the total crop of 4404 tons of strawberries was manufactured. Nearly one quarter of these manufactured berries, viz., 538 tons, were processed in SO_2 . Growers received six or seven cents

per pound on the British market for these berries.¹³

A noticeable feature of late years in the strawberry industry has been the remarkable increase in the number of Japanese growers. At least 80% of the berry-growers in the Maple Ridge District are now Japanese.¹⁴ It is probably due to the fact that the Japanese are more willing to undertake the arduous task of clearing and cultivating the bench lands. Then, too, the problem of getting experienced pickers for a short season has always been a difficult one. The Japanese growers, usually with large families, undertake the work of picking as a family project. The children early become inured to, and adept in, the back-breaking work.

The white grower today confines his attention mainly to the growing of raspberries, loganberries, blackberries and rhubarb, though even here he is faced with the prospect of serious competition from the Japanese.

The following table indicates the development of the small fruits industry since 1920, by showing the acreage of each in a two-year period. These figures are supplied by the Horticultural Branch of the Department of Agriculture, and apply to the whole Fraser Valley. Mr. W. H. Robertson, Provincial Horticulturist, is authority for the statement that the section of the valley east of New Westminster produces approximately 90% of the total.

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13. Report of Dept. of Agriculture for 1935. p.15.

14. From 1936 Survey by Department of Agriculture,
on Fraser Valley Berry Acreage.

Table of Berry and Rhubarb Acreage
Surveys of 1920 to 1936.¹⁵

Variety	1920	1922	1924	1926	1928	1930	1932	1934	1936
	<u>Acres</u>	<u>Acres</u>	<u>Acres</u>	<u>Acres</u>	<u>Acres</u>	<u>Acres</u>	<u>Acres</u>	<u>Acres</u>	<u>Acres</u>
Straw-berries	1147 $\frac{2}{3}$	1807 $\frac{5}{8}$	1273 $\frac{1}{3}$	1235 $\frac{3}{8}$	1880 $\frac{23}{24}$	1499 $\frac{13}{16}$	1416 $\frac{3}{16}$	2103 $\frac{1}{4}$	2453 $\frac{3}{4}$
Rasp-berries	868 $\frac{5}{8}$	1747	1846 $\frac{7}{8}$	1291 $\frac{3}{8}$	998 $\frac{1}{4}$	850 $\frac{7}{16}$	860 $\frac{15}{16}$	1037 $\frac{3}{8}$	1094 $\frac{3}{4}$
Logan-berries	102 $\frac{5}{8}$	271 $\frac{5}{8}$	477 $\frac{5}{8}$	455 $\frac{5}{24}$	334 $\frac{3}{4}$	245 $\frac{1}{2}$	340	333 $\frac{1}{8}$	329 $\frac{3}{4}$
Black-berries	204 $\frac{1}{2}$	253 $\frac{3}{4}$	193 $\frac{1}{12}$	137 $\frac{7}{12}$	139 $\frac{1}{6}$	103 $\frac{5}{16}$	143 $\frac{3}{16}$	134 $\frac{1}{8}$	123
Red Currants	19 $\frac{1}{2}$	23 $\frac{3}{8}$	28	23 $\frac{11}{12}$	28 $\frac{1}{3}$	14 $\frac{1}{8}$	16 $\frac{1}{2}$	29 $\frac{1}{8}$	38 $\frac{1}{4}$
Black Currants	52 $\frac{1}{2}$	70 $\frac{7}{12}$	113 $\frac{1}{2}$	110 $\frac{11}{24}$	99 $\frac{7}{8}$	73 $\frac{11}{16}$	84	166 $\frac{1}{4}$	231 $\frac{3}{4}$
Goose-berries	39 $\frac{1}{2}$	37 $\frac{2}{3}$	41 $\frac{1}{4}$	37 $\frac{5}{6}$	36 $\frac{7}{12}$	33 $\frac{3}{4}$	52 $\frac{1}{2}$	92 $\frac{5}{8}$	96 $\frac{1}{2}$
Rhubarb	85 $\frac{3}{4}$	96 $\frac{1}{8}$	116 $\frac{7}{12}$	198 $\frac{1}{6}$	288 $\frac{23}{24}$	355 $\frac{1}{8}$	365 $\frac{1}{8}$	533 $\frac{3}{4}$	653 $\frac{1}{2}$

Dairying.

At an early date, pioneer settlers established the fact that the Fraser Valley offered ideal conditions for the dairy farm. A mild climate, good water, and nutritious grasses are prime factors in successful dairying and here was a valley that offered them all. As early as 1868 the Chadsey Brothers, pioneer settlers in the Sumas district, had put the industry on a commercial basis.¹⁶ They put their butter in hermetically sealed tins, transported it to the Cariboo, and did a thriving business with the luxury-hungry miners of that district. From that day the value of the

15. From reports of biennial surveys made by Horticultural Branch, B. C. Department of Agriculture.

16. Howay, F. W. - A History of B. C. from the Earliest Times, Vol. II., p.593.

dairy products produced in the valley has increased amazingly, though mainly since the beginning of the present century. It was estimated that in 1893 the Chilliwack, Sumas, and Popcum districts produced 98,796 pounds of butter, but practically all of this was "dairy" butter, i.e., it was made on the farms.¹⁷ For some years settlement was too sparse and the collection of milk too difficult, to ensure the successful operation of creameries.

The first creamery in the valley was the Edenbank Creamery at Sardis, near Chilliwack. This well-known creamery, which began operating in July 1896, was the outgrowth of a private venture by A. C. Wells, one of the pioneer settlers of the Chilliwack Valley, who had been making butter and cheese on his farm since about 1890. In 1896 the Edenbank Creamery Company Limited was incorporated as a cooperative concern with A. C. Wells as the first president. After six months' operation, the first report showed that the total quantity of milk and cream received was 474,824 pounds from which 26,790 pounds of butter was made. After deducting all charges, \$4,851.04 was realized, with butter bringing an average price of 19.66 cents per pound.¹⁸ This creamery was believed to be one of the first in Western Canada to make payment to its patrons on the basis of butter-fat content as determined by the Babcock tester. The following table will give an indication of the growth of this creamery

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17. English, R. E., Problems of a Specialized Area - The Fraser Valley, Part IV of The Dairy Industry in Canada, p.218.

18. Chilliwack Progress, January 20, 1897.

since it began operating.

Production of Butter at Edenbank Creamery.¹⁹

<u>Year</u>	<u>Pounds of Butter</u>	<u>Average Price per Pound</u> (net to patrons)
1897	53,605	20 cents
1900	107,615	(not given)
1905	181,083	27.5 cents
1908	244,412	33 cents

Edenbank creamery continued operating till 1925 when the new utility plant at Sardis was built, but the output of manufactured products dropped considerably in later years.

In 1902, the Chilliwack Creamery, which served the East Chilliwack district, was established. This was also a co-operative concern, and soon surpassed Edenbank in output. In 1906, the Chilliwack Creamery led the province in production of butter with 248,313 pounds while Edenbank was third with 216,160 pounds.²⁰ These creameries handled most of the milk produced in the Chilliwack valley, for difficulties in rapid transportation prevented much fluid milk from being shipped to the coast cities.

Smaller creameries operating in the Fraser Valley in 1906, with production figures were as follows: Sumas, 40,192 pounds; Abbotsford, 15,000 pounds; Surrey, 18,700 pounds. The creamery at New Westminster was handling the milk produced in nearby municipalities, as transportation facilities by boat made that possible. The prevailing retail price of butter in that year varied from 35 cents to 45 cents.²¹

19. Table compiled from figures given in B.C. Government Bulletins No. 10: "Land and Agriculture in B.C." 1904 and 1909.

20. The Daily Columbian, Oct. 28, 1907.

21. Ibid.

From 1910 on, two important factors changed the dairying industry in the Fraser Valley. One was the tremendous growth in population of the coast cities. The other was the building of the British Columbia Electric Railway to Chilliwack in October, 1910. The following table shows the growth in population.²²

	<u>1891</u>	<u>1901</u>	<u>1911</u>	<u>1921</u>	<u>1931</u>
Vancouver	13,709	29,432	120,847	163,220	246,593
New Westminster	6,678	6,499	13,199	14,495	17,524

The Sardis station of the B. C. E. R. was only a few yards from the Edenbank Creamery, and from the beginning a "milk special" left Chilliwack at 6.15 p.m. arriving in Vancouver about three hours later. This changed the entire operation of handling milk. From the manufacture of butter, the two creameries immediately turned their attention to the selling of whole milk and cream in Vancouver. This gave better returns to the producer. In 1911 the average prices received by the farmer for various products handled by the Edenbank Creamery on the basis of butter-fat content was estimated as follows: sour cream, 32.8 cents per pound; sweet cream 37.7 cents per pound; sweet milk 44.6 cents per pound; butter 30 cents per pound.²³ In 1912, the average price of butter-fat in cream was 38 cents per pound, while that of milk had increased to 60 cents per pound.²⁴ During the war years, despite a temporary decline in urban population,

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22. Seventh Census of Canada, 1931, Vol. II, pp.8,9.

23. The Chilliwack Progress, March 20, 1912.

24. Ibid, March 12, 1913.

the production and the price of milk increased.

The dairy farmers of the valley early realized that some form of co-operative marketing was highly desirable. The first attempt at this was made in 1910, when the Fraser Valley Milk and Cream Shippers' Association was formed.²⁵ As there was a comparatively small number of producers interested in this association, efforts were made to strengthen it. The Fraser Valley Milk Producers' Association (F. V. M. P. A.) was accordingly incorporated in 1913, but was not actually organized and operating until February, 1917. It has thus recently completed 20 years of operations. The record of growth during this period has been little short of phenomenal. In December 1917, the membership numbered 847; ten years later it was 2703 while at the end of December 1936, there were 4191 members. These figures represent the number of share-holders in the Association, but at present (1937) there are 2290 active shippers. The area of operations, known to the trade as the "milk-shed" of Vancouver, extends from North Bend to the Pacific Ocean.

According to the report of Mr. A. H. Mercer, general manager of the association, given at a general meeting in February 1937, approximately \$55,000,000 has been paid out in returns to members during the 20 years of the association's existence. During that period 81,230,000 pounds of butterfat has been handled, for which the farmers have received an average price of 51½ cents per pound.²⁶ The highest price for butterfat,

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25. English, R. E., op.cit., p.227.

26. Vancouver Daily Province, Feb. 26, 1937.

1.05 dollars per pound, was paid in the closing months of 1918, while the price in 1934 reached the lowest point, about 27 cents per pound.

In 1916, before the organization of the association, nearly 2,000,000 pounds of butterfat were produced, for which the farmer was paid 46 cents a pound. The consumer paid 11 cents per quart for milk and 40 cents per pound for butter. In 1928, the production of butterfat had increased to 6,000,000 pounds, the producer getting 60 cents per pound butterfat while the consumer paid practically the same price for milk and butter. This remarkable achievement was the result of a reduction in the cost of marketing and handling, and shows what co-operation can do.

Despite the growth of the association, the road was not all plain sailing. Although some economies were effected in 1919 by a reorganization, prices slumped immediately following the war. The average price per pound of butter-fat to the producer dropped from 76 cents to 49.3 cents.²⁷ Production was increasing, and some producers began selling to the fluid market independently of the association. The F. V. M. P. A. was thus forced to turn considerable milk into the lower-priced manufactured products. In 1917 the association sold 80% of its product as fluid milk and cream, but in 1927 only 43% was thus sold.²⁸ The independent producers were quite evidently taking advantage of the relatively stable price of fluid milk to market

27. English, R. E., op.cit., p.232.

28. Ibid, p.234.

their produce at the higher rates.

As a result of some agitation, the provincial government set up in 1928 the Milk Inquiry Commission to study and report on the whole problem of marketing. After a thorough investigation, the commission brought out its report containing 63 recommendations concerning the production and marketing of milk, but "the core of the report dealt with the allocation of the selling price of the total product among the various producers."²⁹ After some months of effort on the part of co-operative producers and opposition by the independents the government passed the Dairy Products Sales Adjustment Act, which brought the selling of milk under control on January 1, 1930. Later in the same year there was a \$2,000,000 merger of milk distributing interests. This took the name of Associated Dairies and the F. V. M. P. A. held preferred stock yielding 7% interest.

Control of the marketing of milk was short lived. The independents, numbering nearly 600, organized themselves into the Independent Milk Producers' Co-operative Association, and agitated for repeal of the legislation. In 1931 the Sales Adjustment Act was ruled *ultra vires* by Mr. Justice Murphy. The provincial legislature in 1934 passed the B. C. Natural Products Marketing Act. In February 1935 the B. C. Lower Mainland Dairy Board was formed, under which all producers were to register and procure a licence to sell milk. The Independents fought this legislation and secured a Supreme Court injunction against the Dairy Products

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29. English, R. E., *op.cit.*, p.236

Board. The whole issue has been very much beclouded when in August 1937 the B. C. Court of Appeal declared the provincial Marketing Act intra vires, and the government extended the term of the Dairy Products Board. But only a small number of producers, even of the F. V. M. P. A., registered with the Board by September 3, 1937 even though threatened with dire penalties for failure by Chairman W. J. Park.

The end of the struggle is not in sight. The Independents are determined to fight compulsory marketing in any form, and up to the time of writing (Sept. 1937) they have made good their stand. The danger would appear to be a long foolish fight in which both sides might lose whatever advantages they have already won.

The production of milk varies greatly with the seasons. During the summer, the daily production handled by the F. V. M. P. A. amounts to 5,000 10-gallons cans, but during the winter this drops to 2500 cans. This output is handled by three main plants, one in Vancouver, one at Delaire about two miles south-east of Abbotsford, and the utility plant at Sardis, near Chilliwack. The normal daily consumption of fluid milk is 1000 cans, handled by the Vancouver plant. The plant at Delaire handles also 1000 cans daily. This means that the utility plant at Sardis must be prepared to handle the surplus of from 500 to 3000 cans daily, according to the season.

This utility plant was built in 1925, and ranks as the largest single creamery plant in Canada. Butter and cheese are the main manufactured products. The yearly output of the former

is nearly 2,500,000 pounds. The cheese is Cheddar and is put up in 5, 10, 25, 40 and 80 pound moulds. Nearly half a million pounds are manufactured yearly, and most of it is sold on the local market. In addition about 2,000,000 pounds of milk powder are produced annually. This finds a ready market on the prairies, and some of it goes even to the Old Country.

In recent years scientific research has made it possible to recover by-products from what was formerly waste material. This is particularly true in the dairying industry. One of these by-products is cheese whey. This makes a very satisfactory poultry food after it has been dried. The necessary equipment for this is somewhat expensive, and the Sardis plant ships all its available supply to Lynden, Washington. Casein whey, which is a non-edible by-product, is now used in a variety of ways. It is a base for glue and paints, and it is readily manufactured into buttons, knife-handles and other similar products. Manufacturers of ply-woods have contracted for a large supply of this product for use as adhesives and it is probable that other uses may be found for it. In addition to these by-products nearly 50,000 pounds of semi-solids are recovered yearly from buttermilk and skim milk. This dough-like substance results when 75% of the moisture is evaporated, and has been found very satisfactory as a poultry food. There is very little waste in the modern creamery.

The plant at Delaire was purchased in 1925 from the Pacific Milk Company and is used solely for the purpose of canning evaporated milk which is sold under the original trade name.

The normal daily output of this plant is 1000 cases, each containing 48 one pound tins. Owing to a novel and improved method of sealing the cans in a vacuum, the milk will keep almost indefinitely.

The dairy farmers of the Fraser Valley have shown themselves to be thoroughly progressive. Not only do they recognize the importance of pure-bred stock of the best milking strains, but they have also recognized the importance of eradicating bovine tuberculosis. In 1925 the federal government enacted legislation which made it possible for districts or municipalities to become tuberculosis-free areas through testing by government veterinary inspectors. Almost immediately the Fraser Valley as an area applied for such a test. The first test showed nearly 10%, or 4,000 animals, were reactors. These animals were slaughtered but the owners received some measure of compensation from the federal government. Subsequent tests have been made, and each has shown a marked decrease in the number of reactors. The following table shows the figures.³⁰

Bovine Tuberculosis Tests in Fraser Valley.

<u>Year</u>	<u>Cattle Tested</u>	<u>Reactors.</u>	<u>Percent of Reactors.</u>
1926	46,174	3,643	7.9%
1927	46,191	515	1.1%
1928	46,480	351	0.76
1929	50,603	188	0.37
1932	66,746	407	0.6
1936	11,571	24	Incomplete

According to regulations, when the percentage of cattle infected with tuberculosis in any area does not exceed one-half

30. Pamphlet: "Bovine Tuberculosis", Dept. of Agriculture, 1936, p.17.

of one per cent (0.5), the Veterinary Director General shall declare such to be an "accredited area" for a period of three years, and when the infection does not exceed two-tenths of one per cent (0.2) it shall be declared an accredited area for a period of six years. Any area not quite up to these standards is known as a "restricted area". The test which is being carried on at the present time, (1937), is likely, from known results, to show a percentage of reactors of less than one-half of one per cent. The purity of Vancouver's milk supply is well safeguarded.

There is no single industry in the Fraser Valley that equals in importance that of dairying. The herds of Holsteins, Ayrshires, Jerseys and Guernseys to be found there are already internationally famous. Any success which has attended the co-operative marketing scheme is due to the homogeneity of the area. There are few other areas where conditions are so ideal for dairying. Accurate figures as to production and total value of dairy products previous to 1910 are difficult to procure, but the following figures, in ten-year periods, show the wonderful development in the dairying industry.³¹ These figures are for the whole valley, but for the section east of New Westminster the figures would be approximately 85% of the total.

<u>Year</u>	<u>No. of Dairy Cattle</u>	<u>Pounds Creamery Butter</u>	<u>Value Dairy Products</u>
1912	12,500	825,000	\$2,760,000
1922	24,700	1,134,500	\$4,878,000
1932	55,000	2,608,500	\$5,115,000

31. From information supplied by Mr. H. Rive, Dairy Commissioner for B. C.

In spite of this growth there is ample room for expansion of the dairying industry in the Fraser Valley. British Columbia in 1936 imported dairy products to a total value of \$2,549,160.³²

Hop Growing.

The climate and soil of the eastern end of the Fraser valley is admirably suited to the production of a splendid quality of hops. At quite an early date these hops had established an excellent reputation among the brewers of Great Britain.³³ That reputation has been maintained for almost a half-century.

The first attempt to grow hops in this province appears to have been made at Aldergrove about 1884 by Mr. John Broe.³⁴ He had come to the Fraser Valley by way of the Pacific Coast states, and travelling up the old Whatcom Trail, took up land at Aldergrove. Having decided to try out the possibilities of hop-growing, he purchased a supply of root stocks from Puyallup, Washington. For a period of 14 years, Mr. Broe grew hops, dried them in a small kiln, baled them, and hauled them over the rough roads, to New Westminster, in order to ship them to his market. It was from this pioneer plantation that the early growers in Chilliwack and Agassiz got their supply of root stocks.

The earliest of these growers in the Chilliwack Valley was Theophilus Dumvill, who planted in 1891 five acres of hops at Sardis.³⁵ In 1894, Mr. H. Hulbert, who had learned his trade

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32. Agricultural Statistics Report, 1936, B. C. Dept. of Agriculture.

33. Editorial, Daily Columbian, New Westminster, May 19, 1894

34. Daily Province, Vancouver, Oct. 28, 1933.

35. The Chilliwack Progress, March 28, 1891.

in the hop-fields of Kent, arrived in the Chilliwack Valley, and determined to pursue his trade there. He purchased 50 acres of land at Sardis from Mr. A. S. Vedder, one of the pioneer settlers, and built a well-equipped drying kiln. As a result of growing unsuitable varieties, Mr. Hulbert at first experienced some difficulties. When this was rectified, Mr. Hulbert had no difficulty in disposing of his crops at a good price. In 1912 his fields produced a bumper crop of from one and one-quarter to one and one-half tons per acre, nearly double the average yield.

In 1903 the E. C. Horst Hop Company of San Francisco bought out the Dumvill holdings in Sardis, and increased the acreage to 250. An equal area was planted by this company at Agassiz, where plantings had first been made in 1892. By 1913 the acreage at both Sardis and Agassiz had been increased to 600 acres. No great increase in acreage was made until land on Sumas Prairie was available. The Canadian Hop Company made extensive plantings at that time on reclaimed land, which has since proved its fertility. The John I. Haas Company has become, within the last few years, one of the most important producers.

The following table of hop production in British Columbia, practically all of which is from the Chilliwack and Agassiz districts, will indicate the growth of the industry.

Hop Production in British Columbia.³⁶

<u>Year</u>	<u>Acres in crop</u>	<u>Yield per acre</u>	<u>Total yield</u>	<u>Price per pound</u>	<u>Total Value</u>
1913	611	1699 pounds	1,038,089 pounds	30 cents	\$311,427
1917	333(a)	810	269,730	50	\$134,865
1923	507	1972	999,804	40	\$399,922
1928	1049(b)	922	967,178	26	\$251,466
1933	984	1502	1,447,425	33	\$491,220
1936	1062	1509	1,602,800	32	\$512,900

(a) small crop owing to very late spring.

(b) increase due to completion of Sumas Reclamation project.

One of the features of the hop-growing industry has always been the influx of hop-pickers during the late fall. In early days, this picking was always done by families of Indians who came from far and near. Expert pickers made reasonably good wages during the three weeks or so of picking. But it was no doubt the social, rather than the financial, opportunities which attracted them to the valley during hop-picking time. Not an evening went by without their engaging in long drawn-out games of chance, accompanied by rhythmic chanting and beating of tom-toms. For many years they had almost a monopoly on hop-picking, but the years of depression broke this monopoly with the introduction of white people and Chinese.

Experience has proved that the growing of hops in the Fraser Valley is a profitable venture. With improved varieties

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36. Table compiled from annual bulletins of Agricultural Statistics Reports, Dept. of Agriculture.

of hops, more satisfactory sprays for insect control, and better methods of cultivation, the outlook for the future is bright. There is no doubt that hop-growing has become an established industry in the eastern end of the valley.

Dominion Experimental Farm, Agassiz.

The Experimental Farm at Agassiz, situated on the north side of the main highway and the Canadian Pacific Railway right-of-way, is one of twenty-six farms operated by the Federal Government. It is an important link in one of the largest and most comprehensive chains of experimental farms to be found anywhere in the world. The Agassiz farm is one of five original farms established in 1887, and like the others its chief purpose is to conduct experiments and researches bearing on the agricultural industry of the province.³⁷

The property consists of 1400 acres, 300 of which have been, or can be, brought under cultivation. The remainder is mountain or bench-land, which was purchased to preserve the fine growth of timber on it, and also to test the possibility of setting out orchards on the mountain slopes, where the situation otherwise made it impossible to make use of the land.

The late Mr. T. A. Sharp was the first superintendent, holding the position from 1888 to 1911. During this time a specialty was made of horticulture by testing all kinds of fruits and vegetables, as well as nut and ornamental trees and

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37. Bulletin: A Guide to Experimental Farms and Stations: Ottawa, 1912, p.156.

shrubbery. These early plantings have resulted in the farm being at the present time one of the beauty spots of the Fraser Valley. It is a fine memorial to the work of Mr. Sharp. The lawns and shrubbery form a delightful setting for the buildings. In the flower garden roses, bulbs, perennials and nearly 100 varieties of annuals give a profusion of bloom from early spring to winter.

In 1911, with the appointment of Mr. P. H. Moore, the fundamental policy of the work was changed. It had been proved by this time that other sections of the province were more favourably situated for the production of certain kinds of fruit than was the Fraser Valley. Accordingly, though the valuable horticultural work was continued, the main project became dairy farming, a line of work in which little had been done experimentally, but which had become one of the chief industries of the valley.

From the herd of pure-bred Holsteins started in 1912 with the purchase of three cows and augmented in 1915 by the purchase of three heifers, much valuable information about the importance of good sires has been secured. The fine foundation animals cost about \$1600, but in 1924 one heifer calf alone was sold for \$2000. The herd now numbers between 60 and 70 animals, and every member, with the exception of one sire, has been bred and raised on the farm. In 1922, Agassiz Segis May Echo made a world's record when she produced 30,886 pounds of milk and 1345 pounds of butter fat in one year.³⁸ Six years

38. Bulletin: The Organization, Achievements and Present work of the Experimental Farms, Ottawa, 1924. p.284.

later, Agassiz Pietje Inka Sylvia made a record of 29,012 pounds of milk, and 1257 pounds of butter fat. These combined records gave this Agassiz herd the distinction of being the only one in the world, of any breed, to raise and develop two cows, each with records of producing over 1250 pounds of butter fat in one year.³⁹ This herd was also one of the first in Canada to qualify as an accredited herd, when testing for tuberculosis was initiated by the Federal Government. The entire record of the herd is a splendid tribute to the excellence of the valley for dairying purposes.

A considerable part of the milk which is produced is used for experimental work in cheese-making, several varieties of prime quality being manufactured. Skim-milk is used in raising calves, pigs and poultry.

In addition to the herd of Holstein cattle, the farm specializes in Clydesdale horses, Dorset Horned sheep, and Yorkshire swine. Many of the individual animals have won highest awards in provincial and international stock fairs.

The poultry industry of the valley has received considerable impetus and valuable publicity as a result of the egg-laying contests which started in 1920. These have been of inestimable value to the poultry raisers of the valley. It was here, in 1926, that the world-famous U. B. C. hen No.6 set a then world's record of 351 eggs in 365 days. This record has since been twice surpassed, once in 1930 by No Drone 5 H, owned by W. Whiting of Port Kells, B.C., and in 1933 by Dereen, owned

39. Records of W. H. Hicks, Superintendent, Agassiz, 1935, 1936.

by M. H. Ruttledge of Sardis, B. C. Each of these hens produced 357 eggs in 365 days, a marvellous record. As a result, the poultrymen of the valley have been called upon to fill orders for eggs and stock worth many thousands of dollars.

Although the successes in animal husbandry have been the more spectacular, the work in field husbandry has not been neglected. During the summer, forage crops and cereals of many varieties are grown under different conditions for experimental purposes. Tests on the many crops are carried out with various fertilizers. In this way the quality and value of commercial fertilizers have been thoroughly tested, and much valuable data adduced. Crop-rotation on the four-year plan is practised.

One of the latest pieces of experimental work is in connection with raspberries. As these are subject to several diseases as well as winter-killing, the aim has been to find new and hardier varieties. Some success has attended the efforts of those working in this field.

Since 1916, Mr. W. H. Hicks has been the superintendent of the farm, and the successes which have attended the various ventures have been largely his. The motto of all the experimental farms in Canada is "Service to the Canadian Farmer". The service of the Agassiz farm to the agriculturists of the Fraser Valley for almost half a century is unquestioned.

Other Phases of Agriculture.

In addition to the products and industries already described, there are many of minor importance which, nevertheless,

have added to the agricultural wealth of the valley. Many of these have been contributing their share for some time, while some are comparatively new.

Stock-raising has always been carried on successfully. In the pre-automobile era, horses of both light and draught breeds were in constant demand, and many fine animals were bred and raised in the valley. There were few farmers who did not raise a few sheep and pigs, but not often did they go into this business extensively.

The raising of poultry, too, in the early days was usually a side-line, but in recent years there has been a remarkable development in this phase of agriculture. This has been mainly the result of the egg-laying contests conducted by the Experimental Farm at Agassiz. The production of eggs and the value of stock has increased greatly in recent years.

In an effort to solve marketing problems, the poultrymen of the valley, in 1919, formed a joint stock company under the name of the B. C. Poultrymen's Co-operative Exchange. The producers received satisfactory returns till 1924 when increased production resulted in lowered prices. Several members of the Exchange began to ship independently in the hope of getting better returns. Following a meeting of the members, it was decided that the Exchange should go into liquidation. This was put through with only a slight loss to the members. In 1929 another attempt at organizing the poultrymen of the valley was made. The B. C. Egg and Poultry Pool was formed, and in conjunction with similar organizations in the prairie provinces,

a profitable business was carried on for two years. Then the depression caused prices to go steadily lower, many became discouraged and withdrew, and early in 1932 this organization was also forced to go into liquidation. It would seem as though co-operative marketing of eggs, as of other products, is an ideal which breaks down in actual practice.

Another profitable side-line for the farmer is the keeping of apiaries. Clover and fire-weed are abundant and produce an excellent brand of honey. In 1935, 1180 apiaries produced 502,150 pounds of honey which sold at an average price of 15¢ per pound.⁴⁰ In this phase of agriculture Surrey has taken the lead.

Root crops of all kinds grow abundantly in the fertile soil of the valley, but these in most cases are used in the feeding of stock. Potatoes have become an important crop, and with the influx of Orientals, this industry has been gradually passing into their hands. Recent events have shown that the situation is fraught with difficulty.

One of the new crops is tobacco. This was first grown on the reclaimed land of Sumas Prairie, and acreage was gradually being extended. An unlooked-for disaster in the floods of 1935 occurred, however, and the crop of 264,000 pounds in 1934 was reduced to a mere 16,000 pounds in 1935. This industry is recovering, however. The 1936 crop was 123,000 pounds from 124 acres or 990 pounds per acre, one of the best yields on record.

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This year (1937) the total acreage was over 400 acres, with more growers than ever before but each with a smaller acreage.⁴¹ Instead of the growers attempting to market their products in the face of strong competition, the whole crop for the last two years has been cured here and sold to eastern interests, a plan which promises much better returns to the growers.

This chapter would be incomplete if no mention were made of the important part played by the Fall Fairs in this record of development. Practically all centres of population in the valley have organized, at some time or other, a Fall Fair. Chilliwack has the honour of having been the first to inaugurate an annual fair. This was first held in 1874. Other municipalities followed suit, but not for some years later. As a result of the improvement in transportation facilities, the tendency recently has been towards consolidation of some of the smaller fairs.

In many cases, particularly in early days, there was not any great number or variety of exhibits, but there was a definite educational value in them for the farmer. The district fairs were usually held late in August, and became merely preliminaries to the annual Provincial Exhibition at New Westminster, which was sponsored by the Royal Agricultural and Industrial Society. It was there that healthy rivalry among the municipalities of the valley always brought forth a magnificent display of live stock and produce. It would be difficult to overestimate the importance of the fall fairs in raising and maintaining the standard of excellence now expected of Fraser Valley products.

41. From information supplied by Mr. G.E.W. Clarke,
District Horticulturist, Abbotsford, B.C.

Chapter LV

Further Economic Development

Although primarily an agricultural region, the Fraser Valley is richly endowed with at least two other sources of wealth, viz., timber and salmon. In addition therefore to the development which was connected directly with agriculture, the legitimate exploitation of these other resources has assisted in no small measure in promoting the prosperity of the whole valley.

Geologically, the valley apparently holds no future for the mining interests. Undoubtedly there are some heavily mineralized areas throughout the district, but these are either of low-grade ore content, or the cost of developing them is prohibitive. Gold-bearing and silver-bearing quartz, coal, copper-iron ore and petroleum have all been found. Ever since the 1890's a good deal of desultory prospecting has been carried on. As an example of that, the New Westminster Registry office recorded the following claims in the year 1902.¹ This list of claims is a good indication of the location of the mineralized areas. The claims were as follows:

Sumas and vicinity-	- - -	-23
Stave River - - - - -	- - -	-18
Harrison Lake - - - - -	- - -	-10
Chilliwack- - - - -	- - -	9
Whonnock- - - - -	- - -	9
Pitt Lake - - - - -	- - -	7

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1. Seventeenth Annual Report of New Westminster Board of Trade. Supplement, Daily Columbian, December, 1903.

The only area in which mining has aided the economic development of the valley is the Mount Baker mining region. This lies just south of Chilliwack, mainly in the United States. The main development has taken place in that country, although some mines have been worked on the Canadian side of the line. This region was only accessible from the north, and after some agitation by the merchants of Chilliwack, the government in 1901 built a road leading to the mines.² It was by means of this road that the monthly clean-up of gold was brought to Chilliwack for shipment.³ All supplies and foodstuffs were taken in the same way. As a result, the merchants and farmers have profited for over 30 years because of a fortunate proximity to the Mount Baker mines.

Fishing.

Ever since the founding of Fort Langley, the salmon-fishing industry has had an important place in the valley's economic existence. The Hudson's Bay Company, in the early years of Fort Langley, realized handsome profits from the sale of salted salmon to the Orient and the Hawaiian Islands. Upon the withdrawal of the company this trade disappeared.

It was not until 1870, after some experiments in the canning of salmon, that the first salmon cannery was built at Anniesville, just across from New Westminster.⁴ In this cannery

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2. The Chilliwack Progress, July 3, 1901.

3. Ibid, January 12, 1922.

4. Manual of Provincial Information, 1930, p.128.

the cans were made by hand on wooden cylinders, and the fish were cooked in the cans by boiling in large wooden vats. This method proved so successful that by 1882 there were 13 canneries on the Fraser River with an annual output of 250,000 cases. By 1901, the number of canneries had increased to 48.⁵ These plants were all established between New Westminster and the mouth of the river.

Although there are six species of salmon that are used commercially, the most important one has been the sockeye. This fish has always commanded the highest price because of its unsurpassed flavour and colour. Its life-cycle is only 4 years, and this fact resulted in an exceptionally big run every fourth year. The growth of this industry is shown by the following table giving the sockeye pack in the "big run" years.

Sockeye Pack on the Fraser River.⁶

<u>Year</u>	<u>No. of cases</u> (48 pounds)	<u>Year</u>	<u>No. of cases</u> (48 pounds)
1885	89,617	1913	719,769
1889	303,875	1917	123,614
1893	457,797	1921	35,900
1897	860,459	1925	31,523
1901	974,911	1929	60,363
1905	837,489	1933	43,745
1909	542,248	1936	165,561

In the "big run" years the pack was mainly sockeye, but in the off years a greater percentage of the pack consisted of springs, chums (dog salmon), cohoes, pinks and steelheads.

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5. Manual of Provincial Information, 1930, p.129.

6. Fisheries Statistics of Canada, Ottawa, 1929, p.232. Figures previous to 1902 are total cases, as species were not separated, but they were practically all sockeye.

There has been a serious depletion in the annual salmon run during the last quarter century. The last big sockeye run was in 1913. In that year, during the construction of the Canadian Northern Railway, the river was blocked at Hell's Gate by a huge slide of rock. As a result few salmon reached the headwaters of the Fraser to spawn. It was a disaster of major importance to the salmon fishing industry on the Fraser. The depletion, however, was aggravated by the practice of United States fishermen using traps and purse-seines in the Gulf of Georgia, while the river fishing was done by gill net. In spite of numerous representations made to the federal government at Washington, D. C., the practice of using traps was continued until 1935. Recent years have proved that co-operation between Canada and the United States is necessary if the salmon fishing industry is to be saved. After many years of negotiation, a treaty was ratified in 1930 by both countries whereby the International Pacific Salmon Fisheries Commission, with three members from each country, was given joint control and operation of the salmon fisheries in the Fraser River area and in contiguous mainland and island waters.⁷ Unfortunately this commission has not yet begun to function owing to the dilatoriness that has characterized the United States Federal Government in all negotiations over this matter. Although the Canadian commissioners have been appointed for some time, the United States has failed to appoint theirs.⁸

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7. Manual of Provincial Information, 1930, pp.129,130.

8. Information supplied by Major J. A. Motherwell, Chief Supervisor of Fisheries for B. C.

In an attempt to maintain the sockeye run in the Fraser River, the Dominion Government placed increased restrictions on fishing. In addition hatcheries have been operated for almost the whole period under review. Seven hatcheries in all were operated on the Fraser River watershed, four of them being on the Lower Fraser. The first of these hatcheries, located at Bon Accord near New Westminster, was established in 1884. The Harrison Lake Hatchery was opened in 1905, and during the war additional hatcheries were established at Cultus Lake (1916) and at Pitt Lake (1917). Bon Accord had been closed in 1915. The average annual release of sockeye fry, estimated over the period of their operation, was as follows:⁹

Bon Accord- - - -	6,180,572
Harrison Lake - -	14,525,100
Cultus Lake - - -	4,815,581
Pitt Lake - - - -	5,483,926

Considerable criticism arose during post war years concerning the need of hatcheries in this province. There appeared to be no evidence to show that the benefits derived justified the annual expenditure of approximately \$100,000 on them. Accordingly the Biological Board of Canada, which is the scientific research branch of the Federal Department of Fisheries, was asked to conduct an investigation into the salmon-hatching methods as practised in British Columbia. This branch then took over the Cultus Lake hatchery for a ten-year period to conduct the necessary experiments. The report of this board

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was made last year, and as a result of the recommendations therein, the department decided to close all salmon hatcheries in the province as from 1936.¹⁰ Cultus Lake hatchery, however, was to remain open till the end of 1937 to complete necessary investigation. Whether the work of the hatcheries was partially responsible or not, efforts to restore the salmon run have had some measure of success, for the sockeye pack in 1936 was the biggest since 1914.¹¹

Particularly in early days the salmon-canning industry was one of great importance to the settlers of the valley. Despite the location of the canneries, the section of the river above New Westminster was a favoured spot for sockeye fishing. An early government bulletin on Maple Ridge Municipality records the fact that "the salmon fishing industry employs a great part of the population in the summer time."¹² Some of the finest sockeye fishing on the river was to be found between Fort Langley and Whonnock. Some record catches have been made there, as many as 25,000 fish at one cast being made. At that date many fishermen made their headquarters at Fort Langley during the salmon run.¹³ Figures showing the number of residents purchasing fishing licences in the early days are difficult to obtain, but in 1901, a record year, at least 197 li-

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10. Information supplied by Major J. A. Motherwell.

11. See Table of Sockeye Pack, *supra*, p. 81.

12. Land and Agriculture in B. C., 1903, p.86.

13. British Columbian, New Westminster, Sept.17,1910.

cences were purchased by residents of the valley between Brownsville and Harrison River.¹⁴ Of these 30 were residents of Fort Langley and an equal number were from Whonnock. The average number of licences over a term of years would be nearly 200, according to Mr. R. W. McLeod, Supervisor of Fisheries at New Westminster. No doubt as a result of the record catch last year, nearly 300 licences were taken out this year by residents of the Fraser Valley living east of New Westminster. A resident is a British subject with at least six months' residence in the valley.¹⁵ Only such persons can get a licence to fish between the bridges at New Westminster and Mission. Any fisherman living below the bridge cannot obtain a license to fish above. As a result, fishing between the bridges is restricted to bona fide residents of that stretch of the river. To fishermen on both sections of the river, operations are restricted to the five days beginning 6 a.m. Monday to 6 a.m. Saturday.

From reliable sources, it is learned that the sockeye run was a God-send to the settlers along the river. Although these farmers had no difficulty in growing a good deal of their food, they depended on the fishing to provide them with some ready cash. It was a poor year when they did not make \$500 or \$600 for their summer's work. The canneries used to send a scow

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14. This information obtained from old Register of licences in office of Supervisor of Fisheries, New Westminster, B. C.
15. Japanese may take out licences, if they are naturalized British subjects. Their quota, however, has been restricted to 400 licences since 1922 (Duff Commission). Practically all Japanese fishermen live at Steveston.

up the river each day for the catch. If the run was a good one, each fisherman was restricted to a quota, and he did not need to be out more than two or three days to get his quota. But whatever the number of days he was away, it generally devolved on the women and children to do the farm work during his absence. Getting in the crop of hay or potatoes was the lot of the pioneer women, if their men-folk were fishing.

Despite the serious depletion in the sockeye run, the returns are just as remunerative today, if not more so, than in the days of the big runs. Then the fisherman paid \$10 for his licence, but since the year 1922, these have cost only \$1.¹⁶ In earlier years too, the canneries paid the fishermen very little. In 1901 it was 10 and five-eighths cents per fish.¹⁷ For the last 20 years, the canneries have paid from 50 cents to 60 cents a fish.

It is unsafe to make any predictions as to the future of the salmon-fishing industry. The catch of 1936 has raised hopes that some measure of restoration has come but it is too early as yet to accept it as fact.¹⁸ But whatever the future holds, it is evident that the lot of the pioneer farmer in the Fraser Valley would have been a much more difficult one if he

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16. Report of B. C. Fisheries Commission, 1922, p.19.

17. Annual Fisheries Report for 1901, Ottawa, p.XXXVI.

18. Vancouver Daily Province, Sept. 22, 1937. The only figures available are for the whole province. The sockeye pack for 1937 was 318,637 cases; in 1936 it was 403,717 cases.

had not been able to depend on the rich annual harvest from the river to supplement the harvest from his fields.

Lumbering.

It is difficult now to estimate what the quantity of marketable timber in the Fraser Valley was, previous to settlement there. A conservative estimate would be at least 20 billion feet B. M.¹⁹ Much of this consisted of valuable stands of Douglas fir, red cedar and hemlock, the most readily accessible of which have long since disappeared. One of the last of these great stands was the famous "Green Timbers," about five miles east of New Westminster. Through it ran the Pacific Highway. Despite strenuous efforts to save this stand as a permanent scenic attraction, practically all of it has been logged off during the last decade (1927 - 1937). Forest fires and land clearing operations have also taken toll of a great deal of valuable timber, but the government policy in recent years with regard to reforestation arouses some hope that the valley will not be entirely denuded of its forest wealth.

The lumbering industry in the Fraser Valley has been under the control of the federal government. When British Columbia joined the confederation in 1871, the province agreed to give a strip of land 20 miles on each side of the railway, in con-

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19. Canada and Its Provinces, Vol. 22, p.507ff:
Mr. A. C. Flumerfelt, Chief Forester for B.C.,
estimated (1914) total stand of lumber in
railway belt as 40 to 50 billion feet.

sideration for the building of the Canadian Pacific Railway. This strip, 40 miles wide, extended from the Alberta boundary on the east to a line running just east of New Westminster (Scott Road and North Road), and the eastern shore of the north arm of Burrard Inlet. The Railway Belt was conveyed to the Dominion in 1883, and was so administered until August 1, 1930 when it was returned to the province.

All the timber on unalienated land in the Railway Belt could be acquired under licence or under permit, mainly the former. Dominion timber licences were sold by auction, the holding value of the timber being realized by way of a cash bonus at the time of sale instead of an annual rental as in the provincial system. West of Yale there was an annual rental of five cents per acre, and a royalty on all cut timber of 50 cents per M feet B. M.²⁰ This was cheaper than the system of licensing by the province, and together with the fact that timber berths in the railway belt were easily accessible and close to the railway, it is easy to understand why they had the preference from an investor's point of view.

Exact figures as to the cut of lumber in the Railway Belt are not available. Early records are for lumber on which royalty was collected, and are for the whole belt, not any one section. The inclusion or exclusion of various forms of forest products such as shingle bolts, poles, piling, fence posts, ties, cordwood, etc., for which other standards of measurement

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20. In 1919, the rental was increased to 10 cents per acre, and the royalty to one dollar per M.

than board feet are used, complicates the compilation of statistics. Different methods of scaling the cut were used at different times. The following table, compiled from various sources,²¹ is as accurate as it is possible to make it, and indicates the steady growth of the lumbering industry.

Revenue and Cut of Lumber in New Westminster Section

(Railway Belt) 1885 - 1930

Conversion Factors: 1 cord - 500 b.f.; 1 lineal foot - 5 b.f.

<u>Year</u>	<u>Revenue</u>	<u>Lumber cut</u> M.b.f.	<u>Shingle</u> <u>Bolts</u> cords	<u>Poles, Piling</u> <u>Lineal feet</u>
Calendar 1885	----	6,748(a)	----	----
Fiscal 1889-90	\$ 45,845.09	16,684	----	----
Fiscal 1894-95	24,927.18	10,042	356	----
Fiscal 1899-1900	27,688.54	29,684	881	----
Fiscal 1904-5	71,079.27	21,368	7,282	----
Fiscal 1909-10	126,351.23	93,858	15,454	40,261
Fiscal 1914-15	89,277.34	67,642	33,680	117,425
Fiscal 1919-20	128,137.72	86,073	47,400	125,360
Fiscal 1924-25	330,670.46	186,697(b)	30,204	203,454
Fiscal 1929-30	298,737.18	184,215(c)	20,192	2,143,378

(a) Lumber cut and revenue up to and including 1910 is from entire Railway Belt. Mr. E. Walmsley, Crown Timber Agent at New Westminster for nearly 25 years, estimates the cut in the Fraser Valley as 40% of the total. Figures for year 1915 et seq. are for New Westminster Division, extending as far east as North Bend.

(b) Cut is for calendar year 1925.

(c) Cut is for calendar year 1929 - transfer of Railway Belt on August 1, 1930

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21. Whitford, H. N. and Craig, R. D., Forests of British Columbia, Ottawa, 1918.
Annual Reports of Timber and Grazing Lands Branch, Department of Interior, in Sessional Papers.
Old ledger containing Department of Interior's Scalers' Returns 1925-1930.

When the transfer of the Railway Belt was made in 1930, the bulk of the marketable timber had been taken off. It was estimated that the province had acquired six billion feet of standing timber, in addition to the mining, land and fisheries rights. Revenues in dues, fees and leases were worth nearly \$500,000 a year.²² It has been impossible to get exact figures for the lumber cut in recent years, since they are not segregated from the total figures for the whole coast district. There are still six or seven mills operating in the valley, but they are small. The stands of accessible timber are mainly around the Harrison Lake and in the Chilliwack River districts.

To the farmer and rancher of the valley, these great stands of timber were a detriment rather than an asset. He wanted the land for crops and as there was very little sale for timber until about 1910, he was forced to burn it up. Millions of feet of the finest fir, cedar and hemlock were thus destroyed. Some of it was used for fuel, and if there was a small mill near-by he could get his lumber for house or barn. But in the main it was simply an added difficulty in clearing the land. Only a few were able to profit from the sale of timber on their property, and they were fortunate enough to be near a sawmill, or were able to save their stands until a late date. With the construction of the B. C. Electric Railway in 1910 there was an increased activity in lumbering. In Langley alone at this

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22. British Columbian, August 6, 1930.

time there were six mills operating, with an estimated cut of 700,000 feet b.m. a month.²³ Not only was it much easier to ship lumber to tidewater, but the mills near the railway were able to install electric power to run their machinery.

One of the features of the lumbering industry in the early days was the number of small mills operating under permit. These would be set up in a good stand of timber and remain in operation for a few years or until such time as the lack of timber made it necessary to move. These mills were mainly cutting for local trade. One of the first of these in the eastern end of the valley was operated by Messrs. C. L. and H. G. Street and R. E. Barker in the Sumas district. It was begun about 1892 and continued for over 10 years, cutting about 3,000 feet daily.²⁴ About the same time there was a mill in Langley operated by the Murray Brothers.

One of the largest mills in the British Empire is situated within the former Railway Belt. This is known as the Fraser Mills, about 2 miles east of New Westminster. It has a total frontage of nearly one mile, and has a capacity of 350,000 feet at a single shift.²⁵ Logs from the Fraser Valley were used extensively about twenty five years ago but in recent years practically all the logs come from Vancouver Island.

The lumbering industry has played a most important part in the economic life of the valley. It has not benefitted the

23. British Columbian, September 16, 1910.

24. Information by Mr. C. L. Street, Chilliwack.

25. Vancouver Morning Sun, March 31, 1925.

settlers as directly as has the fishing industry, but it has offered steady employment to a large number of men. With a policy of reforestation much can be done to maintain this industry as a permanent one though the original forest has now largely disappeared.

Fruit Canneries.

The establishment of fruit canneries at several centres was a logical development of the fruit-growing industry. Pioneers of the Chilliwack Valley are unanimous in the opinion that a large quantity of fruit rotted every season because of lack of facilities to market it. The first attempt to cope with this problem was made at Chilliwack in 1891.²⁶ The Fraser Valley Fruit Canning Company operated a plant in that year under the management of G. Melhuish. In the first season, inspite of a comparatively poor crop, 1000 cases of fruits and vegetables were put down.²⁷ These included jams, jellies, canned fruit and garden products. An exhibit of these products was made up and shown at fairs in eastern Canadian cities, where it won very favourable praise. This cannery was operated for three years, and though the manager claimed that it was closed because the farmers were sending inferior fruit,²⁸ the likelihood is that there was not sufficient surplus fruit to keep the plant in operation. Much of the fruit at that time was being shipped by steamer to the Victoria market.

26. Chilliwack Progress, April 16, 1891.

27. Ibid, October 8, 1891.

28. See Editorial, Ibid, April 25, 1894.

The next venture in Chilliwack was begun by the Chilliwack Canning and Preserving Company about 1908. It too lasted about four years. Profiting by mistakes made earlier in putting down fruits and vegetables which were not readily saleable, this company had an especially satisfactory year in 1910. Five tons of assorted fruits were handled daily, mainly cherries, strawberries, raspberries and blackberries. In addition a carload of white beans and five tons of rhubarb were handled, and a considerable quantity of apple cider manufactured. In all, over 12,000 cases of fruit were put down that year by a staff of 15 employees.²⁹

The canning of fruit is no longer of major importance since transportation facilities offered by the railways have improved. As a general thing, the canneries get only surplus fruit after the Prairie and Coast markets have been supplied. Fresh fruit, shipped in especially refrigerated cars, reach even the Winnipeg market in good condition, and naturally commands a better price than canned fruit. There is one small canning plant today at Sardis,³⁰ but the latest development is the factory for canning corn operated by the Broder Canning Company of New Westminster.

As the centre of the small fruits district, Mission has probably been most active in the fruit canning industry. In

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29. British Columbia, September 3, 1910.

30. Operated by Mr. H. W. Storey. In 1936 his output was three and one-half tons of fruit and six tons of vegetables.

1911 the first cannery there was established by the Kootenay Jam Company. The pack consisted mainly of jams and jellies, and the fruit handled included 15 tons of strawberries, 20 tons of raspberries, 45 tons of rhubarb, 5 tons of gooseberries, and 5 tons of currants.³¹ This plant was later bought by the King-Beach Manufacturing Company, and considerably enlarged. It was operated very successfully for some years, its products being marketed under the well-known trade name of "K-B". About 1928, this plant was operated by the Farmers' Canning Company, but the familiar "K-B" trade name was retained. At present this plant is being operated by the Canadian Cannery (Western) Limited, a nationwide organization, whose products go on the market with "Aylmer" as a trade-name. The present pack of fruits and vegetables in this plant amounts to over 100,000 cases annually.

Other canning establishments of this district include a jam factory operated by the Pacific Co-operative Union; the Northcote Brothers jam factory; the plant of the Associated Berry Growers at Hatzic; a processing plant of the Fraser Valley Fruit Growers which ships processed berries to Great Britain; and the plant of the Dewdney Rhubarb Association with an annual output of 45 carloads of rhubarb.³²

Fruit growers who live in sections of the valley near New Westminster make use of the canning establishments in that city.

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31. British Columbian, Sept. 11, 1911.

32. From information supplied by Board of Trade, Mission, B.C.

Thus the history of the fruit canning establishments cover practically the whole period of development during the last half-century. It is legitimate to assume that such canneries will be as necessary to the fruit-growers in the future as they have been in the past.

Fur-Farming.³³

A valuable addition to the industrial activity of the valley during the post-war period is the increasing number of those who are going in for fur-farming. It affords, too, a most interesting commentary on the economic fluctuations which have taken place since the founding of Fort Langley in 1827 by the Hudson's Bay Company. The traditional policy of the company was the control of the fur trade, but it is a matter of record that this trade at Fort Langley soon became of minor importance. It was from the fisheries and the farm that the greatest profits were made. Through the years these industries have retained their pride of place. Almost a century later, furs have again become a source of livelihood, albeit in a manner that would never have been conceived of by the chief traders of old Fort Langley.

The success of the fox-farms in Prince Edward Island has probably led to this development, for it is a noteworthy fact that some of the pioneers in this new valley industry were men who had come to British Columbia from Canada's smallest province. Although the climate of the Fraser Valley was thought

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33. From information largely supplied by Mr. C. H. Robertson, Rosedale, B.C.

at first to be not so suitable as that of the colder eastern provinces in producing good fur, some experienced fur-farmers now claim that the reverse of this is true. Cold winter climates tend to produce a thick but coarse fur. Animals raised in the more temperate, moist climate of the coast regions have a finer and glossier coat. Though this claim may not as yet have been incontrovertibly proved, it is true that fur-farms in the valley are increasing in numbers, and the present demand for furs far exceeds the supply.

There have been failures of course in this new industry, but mainly in the ranks of those who went into it on a large scale with a great deal of capital spent on equipment. Those who took it up as a sideline to other forms of farming have been able to profit from mistakes that were made at first. Fox-farming was evidently the first phase of this industry but experiments have been made with other animals, notably mink, rabbits, muskrats and raccoons. Efforts to raise the latter three have so far been unsuccessful and most of the present day farms go in for raising foxes or mink. It is more difficult to raise the former, but of course the successful breeder makes greater profits with foxes than with mink. Pelts from mink bring ten dollars to thirty dollars according to size and condition. A good pair of mink for breeding purposes will bring 100 dollars or more, and the present day demand for foundation stock is brisk. With foxes there is more variability in color and in marking. Consequently there is more range in the price

of fox pelts, 35 dollars to 100 dollars or more for superior specimens. A good pair of foxes for breeding purposes would bring up to 500 dollars on the present market. Most of the pelts obtained in the valley go to the Vancouver market.

Mr. C. H. Robertson, of Rosedale, was probably the pioneer in fox-farming in the Chilliwack Valley. He began operations on a small scale in 1924. He has been quite successful as a breeder of foxes but is firmly of the opinion that fur-farming as a side-line to dairying is the ideal plan.

Undoubtedly there is a bright future in this industry for those with the necessary patience and intelligence to handle such animals as the fox and mink. There are fur farms today at Laidlaw, Rosedale, Sardis, Cloverdale, Kilgard and on the Pacific Highway in Surrey. The industry has already shown considerable expansion.

Other Industries.

For many years Clayburn on account of its brick and tile factory has been an important industrial centre. This plant began operations about 1907, and has made very satisfactory progress since that time. The company chiefly manufactures building brick, fire brick, vitrified sewer pipe and drainage tile. The company, the Clayburn Company Limited, has ample deposits of high-grade fire clay in Sumas Mountain.

After operating for over 20 years at Clayburn, the company planned in 1928 an important program of extension.³⁴ In 1919

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34. British Columbian, Oct. 9, 1928.

they had taken over a plant at Kilgard, which had been closed down during the war. Kilgard proved to be more accessible to the clay deposits, and the plans of the company call for ultimate concentration of the plant at Kilgard. At the present time both plants are in operation. A brick and tile plant has also been in operation in Port Haney for the last 30 years.

Clayburn and Haney bricks have been used in many of the largest buildings in Vancouver and the lower mainland. Brick and tile products from these Fraser Valley plants have established a sound reputation, both as to price and quality, among the contractors of the lower mainland.

A comparatively new industry has been established by the Western Peat Company and is an interesting example of what can be accomplished along new lines by initiative and enterprise. This company's first plant is to be found on the Pacific Highway at the intersection of the Hjorth Road, in close proximity to the peat lands. Here the peat is dried, cut, and bound ready for market. It is extensively used by poultrymen throughout the whole Pacific Northwest, nearly 70% of the total output being so used. It is put on the floor of poultry houses for scratching purposes and has been found much superior to straw for that purpose. Asparagus growers in California use it extensively in shipping.³⁵ For this purpose the peat is cut into slabs one-half inch in thickness. The slabs are soaked in water and used as a base for the bundles of fresh asparagus.

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35. Vancouver Daily Province, August 22, 1936.

The asparagus is then pre-cooled and can be safely shipped practically anywhere.

The manager of the company, Mr. E. E. Carnocross, estimates that they have enough peat land adjoining the Pacific Highway for five years cutting and an additional area on Lulu Island which will last for 30 years.

The industrial development of the Fraser Valley is not confined merely to those plants which have been mentioned in this chapter, and which are located in the area east of New Westminster. Within the immediate environs of that city are many mills and factories, many of which depend on the Fraser Valley for their raw materials. Among these are paper mills, lumber mills, box factories, creameries, breweries and abattoirs. For some years a tire manufacturing plant was located at Port Coquitlam. The transcontinental railways maintain their repair shops and roundhouses in the valley - the Canadian Pacific at Port Coquitlam and the Canadian National at the original terminus of the line, Port Mann. All these have added their quota to the record of industrial development in the Fraser Valley.



A panoramic view of Sumas Lake
before reclamation, March 25, 1922.



A panoramic view of Sumas Prairie
after reclamation, August 28, 1927.

Chapter V

The Sumas Reclamation Project.¹

The project of reclaiming and draining the lands of the Sumas prairie area from the flood waters of the Fraser River was one which challenged the attention of farmers, engineers and financiers since the 1870's. Probably no other project in the history of the province has excited so much agitation for so long a period of time. Scarcely a year went by during that period that did not show a record of much time, money and energy spent on the project. In common with many such difficult enterprises, the early history of the plan is strewn with failures and abortive attempts to get the work started. It was not until 1919 that the provincial government, through the Land Settlement Board, took hold of the work. With the completion of the project in 1926 came the realization of the long-deferred hopes of the farmers of the valley, and the addition of some 30,000 fertile acres to the agricultural resources of the Fraser Valley and of the province.

The earliest record of this scheme goes back to 1875 or 1876 when some consideration of it was given by the late lieutenant-governor, the Honorable Edgar Dewdney, who had previously

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1. Information for this chapter was mainly obtained from a special report for the provincial legislature prepared in December, 1926, by the Land Settlement Board acting as Dyking Commissioners for the Sumas Drainage, Dyking, and Development District. In addition private papers of Hon.E.D. Barrow were used. Mr. Bruce Dixon, Dyking Inspector, also kindly supplied information.

made a survey of the whole district. The matter appears to have first taken on definite form in 1878 when the provincial government through the "Sumas Dyking Act, 1878" authorized Ellis Luther Derby to carry out the work of dyking and draining certain lands in the Chilliwack, Sumas and Matsqui districts. In return Derby was to receive certain taxing privileges on lands which were to be benefitted and which had previously been crown granted, and also a grant of some 45,000 acres of government lands in Chilliwack and Sumas.

There are amendments to the above-mentioned act, dated 1879, 1883, 1885 and 1888, which fact would indicate that the scheme was still of lively interest but there is no record of Derby or of anyone else having actually commenced construction during that decade.

About the year 1890, the problem of draining the area became greatly complicated as a result of one of nature's pranks. The Vedder River, which previously had followed the present Luck-a-kuck channel through Sardis, changed its course from Vedder's crossing, and flowing northwesterly, emptied into Sumas Lake. This proved to be a mixed blessing, for the silting action made more fertile the lake bed soils even though the difficulty of reclaiming the Sumas area was materially increased.

The next step was the organization of two companies to reclaim Sumas, one in 1891 and the other one year later. The former accomplished nothing, but the latter incorporated as the Sumas Reclamation Company, appeared to have been the first to have actually done some construction work. The principal

shareholders in this company were G. A. Holland, H. S. Mason, J. A. Lumsden, and F. Lumsden. They were given the right to divert the Vedder to its old channel, but any work which was done at that time was subsequently abandoned.

In 1893 the district was organized under the "Drainage, Dyking and Irrigation Act", and Donald McGillivray, J. L. Atkinson, W. A. Maher, and Asa Ackerman were appointed as Commissioners. Their first important act was to enter into an agreement with Messrs. Keefer and Smith, engineers, to carry out a survey and make plans for the reclamation. These engineers had done work for previous companies and were already in possession of considerable information. Their survey was completed early in 1894, and on petition of the commissioners, the "Sumas Dyking Act, 1894" was passed by the legislature, giving the commissioners authority to carry on work undertaken by previous companies. They endeavoured to finance the undertaking by asking the government to guarantee bonds to the extent of \$340,000. The government would not accede to this request, but did agree to guarantee the interest on bonds up to \$18,000, which amount had already been expended on surveys and preliminary work. The commissioners got into further financial difficulties, and became involved in a law suit with Keefer and Smith, as a result of which a receiver was appointed by the court. The "Dyking Debenture Act, 1897" provided for the purchase by the provincial government of the District of Sumas bonds amounting to \$18,000, and in this way the financial affairs of the district were straightened out.

Among the later development projects, the first of which there is definite official record, is that of Messrs. Lewis and Hill, of Seattle, who, in 1905, made surveys and prepared completed plans. A new board of commissioners was appointed and at a meeting of property owners on September 17, 1906, the proposed plans and estimates were passed by a vote of 103 in favour, 53 against. The commissioners then addressed a memorial to the federal government, requesting that all crown lands be made subject to assessment. As this condition was considered essential to the success of the plan, the refusal of the Department of the Interior at Ottawa to accede to the request caused the abandonment of the plan.

In May 1908, F. R. Glover, manager of the British Columbia Electric Railway, appeared before the commissioners with plans prepared by J. Francis Lebaron and associate engineers. The railway company at that time was constructing its Fraser Valley line, and was extremely desirous of encouraging the development of the Sumas lands. However, the London Board of the company did not approve of the undertaking, and it was therefore dropped.

The Dominion Stock and Bond Corporation, Ltd. of Vancouver was the next concern to attempt the project. In October 1910, the property owners approved of the scheme by the necessary majority vote, and an agreement was drawn up between the commissioners and the corporation. This company did not proceed with construction work within a reasonable time, and when the commissioners refused an extension of time, they dropped their plan.

In April 1911, L. M. Rice and Company of Seattle, commenced negotiations with the commissioners. During the summer the company carried out surveys, prepared plans, and entered into an agreement with the commissioners. But it was not till January, 1913 that the land owners ratified the plans and agreement by a vote of 104 in favour to 37 against. This company had trouble in financing their plans and never actually made a start at construction. War intervened and though the company was granted an extension each year till 1916, the long hoped-for fulfillment of dreams was once more deferred.

In August and September 1917, several copies of a petition were circulated throughout the district for the signatures of landowners. Those who possessed 87½% of the value of the land agreed to sign. This petition gave the description and bounds of all lands in the district, and requested that the Land Settlement Board be appointed as commissioners to carry out the drainage and dyking of the district. It also contained the assessed value, acreage and description of the property belonging to each signatory, together with his address and date of signing.

The last meeting of the old Dyking Commissioners was held on October 1, 1917, after which all papers, agreements, maps, etc. pertaining to the Sumas project together with unpaid liabilities to the amount of \$13,365.79, were turned over to the Land Settlement Board. A month later, the owners appointed an advisory board of the Sumas Dyking District, the members of which were R. N. S. Cresswell, F. Fooks, J. L. Atkinson,

A. Campbell, W. T. Blatchford and C. E. Eckert.

On February 4, 1918, order-in-council No. 1369, approving of the resignations of the commissioners and appointing the Land Settlement Board to fill the vacancy caused by such resignations, was passed.

A preliminary meeting of the Board was held on April 18, 1918, at which several engineers and associates submitted plans and estimates for the proposed reclamation works. However, the commissioners were given authority to carry out an independent investigation of the scheme at an estimated cost of \$10,000.

H. C. Brice and W. C. Smith were appointed engineers to carry out this preliminary investigation. All available information that could be secured as a result of previous surveys was placed at the disposal of the board's engineers.

In February 1919, the engineers submitted a preliminary report which was placed before a meeting composed of the members of the Land Settlement Board and of the Sumas District Advisory Board. After careful consideration, this meeting instructed the engineers to carry on the work and complete the plans and specifications for the work. About this time H. C. Brice died, and Mr. F. N. Sinclair, C. E., was appointed to act in conjunction with Mr. Smith.

The plan referred to above was known as the Brice-Smith plan. But after Mr. Sinclair's appointment a decided difference of opinion arose between the two engineers and when the final report was submitted in April 1919, it took the form of two distinct plans and estimates; one, the Brice-Smith plan, spon-

sored by Mr. Smith, and the other, commonly referred to thereafter as the Sinclair plan, presented by Mr. Sinclair.

On July 15, 1919, the protagonists of each plan appeared before a special meeting held in the Legislative Buildings in Victoria. Members of the provincial government, the Land Settlement Board and the Advisory Board were present. Each engineer explained his own plan and estimates in detail. As a result, a consulting engineer, Mr. C. E. Cartwright, C. E., of Vancouver, was appointed to study both plans with a view to recommending the more suitable one. In October of that year, Mr. Cartwright made his report in which he favoured Mr. Sinclair's plan. Accordingly Mr. Sinclair was formally appointed as engineer of the Sumas Dyking District on October 28, 1919. On November 24, 1919, a meeting of the property owners was held at Huntingdon, B. C., to hear the report of the engineers and to record their vote on the whole project. At this meeting, the minutes show that the Honourable John Oliver outlined the position of the provincial government in regard to the whole project, the following words being especially emphasized: "The provincial government is taking no responsibility whatever for this scheme, understand that clearly". Mr. Cartwright made a report explaining his reasons for preferring the Sinclair plan. He was followed by Mr. Sinclair, who explained his plans and estimates, and gave a figure of \$1,500,000 as the cost of the project. A ballot was then taken by the property owners as to the advisability of the reclamation of the district. The result of this vote showed that those owning 86% of the assessed value of the

land were in favour of proceeding with the plan.

Advertisements calling for tenders for the project (earth and bridge contract) were inserted in the press on January 22, 1920, the time limit for receipt of tenders being set for February 25 of the same year. Seven tenders were received by the commissioners before the expiry of the time limit. Of these, three tenders, submitted by Jones and Rant, Rex McArthur Company, and Lomas and McDonald Company, were not considered as conditions of instructions to bidders had not been observed, and the necessary certified cheque for 5% of the bid did not accompany the tender. The other bids were as follows:

Engineer's estimate for units covered by contract -	-\$980,244.95
1. Northern Construction Company - - - - -	-\$1,527,657.00 -
alternative 5% on \$1,271,859.00.	
2. Pacific Construction Company- - - - -	-\$1,525,819.62 -
cost plus 10% only.	
3. Foundation Company of B. C. Ltd.- - - - -	-\$ 950,186.37 -
cost plus 10% only.	
4. Marsh Bourne Construction Co. - - - - -	-\$1,182,062.99 -
alternative plus 5%	

As all of these bids were considerably higher than the engineer's estimate, and as some firms had agreed to revise their figures, it was decided to ask each of the four firms to submit a revised tender, which was to be in by March 18, 1920. The figures in the revised tenders, however, were the same as the originals, with the one exception that the Northern Construction Company had reduced their bid by approximately \$300,000.

In addition to the above contract, the engineer also submitted a list under the heading "Contracts to Let" as follows:

Dams and Plant - - - - -	\$285,000.00
Ditching - - - - -	60,000.00
Right-of-way - - - - -	24,000.00
Fencing- - - - -	22,730.56
Extra Work - - - - -	30,000.00
Engineering- - - - -	<u>98,024.49</u>

Total - - - \$519,755.05

This total of \$519,755.05, added to the earth work contract estimate of \$980,244.95 made up the engineer's estimate of \$1,500,000 as placed before the property owners the previous November.

After careful consideration of the tenders, the commissioners felt that they had no alternative but to recommend that the tender of the lowest straight unit bidder, that of the Marsh Bourne Construction Company, be accepted. Before doing so, however, it was thought advisable to call another meeting of the owners. This was duly held at Huntingdon, B. C., on March 27, 1920.

The minutes of this meeting show that approximately 80% of the property owners were present, and that a vote taken resulted in a decision to carry out the contract by 102 for, and 6 against. This was done despite the fact that Mr. Sinclair's original estimate of \$1,500,000 had been increased by \$300,000.

As there was some question of the validity of the commissioners' actions, in view of the number of previous enactments concerning the same project, it was considered advisable to draft enabling legislation to clear up any doubts on the matter. Accordingly, the Legislature passed the "Sumas Drainage, Dyking and Development District Act" on April 17, 1920. By

this act, all former plans, surveys, contracts, etc. were annulled; the appointment of the Land Settlement Board as Dyking Commissioners was ratified; all acts of the Board in connection with contracts were validated; and provisions made for the financing of the project and for preparation of assessment rolls.

The Land Settlement Board was re-organized in April 1920, and became a one-man board with Col. R. D. Davies as sole member. The board's status as Dyking Commissioners for the Sumas Dyking District was not altered by this fact.

The contract with the Marsh Construction Company, Limited, (Mr. Bourne had withdrawn from the original company) was signed on April 29, 1920. This provided for the completion and delivery of the work on or before the 30th day of June, 1922, and also provided for extra work, not covered by the tender but done under the order of the engineer, to be paid for at actual cost plus 10%. Mr. Sinclair was appointed as chief engineer of the project as from the date of the signing of the contract.

Construction work was actually begun on August 30th, 1920, when a dragline excavator commenced work on the McGillivray interception ditch. The contractors soon found themselves in financial difficulties over the purchase of plant and equipment. In November the engineer complained that arrangements in regard to the commencement of work on the largest single unit, i.e., the Vedder dykes and canal, were unsatisfactory. The contractors were given till January 1, 1921 to make adequate provision of machinery, failing which their contract was to be cancelled.

Reorganization of the Marsh Construction Company took place in January of 1921. Mr. J. R. Duncan became president of the firm and undertook personal responsibility for the financing and general management of the company. Improvement in conditions followed. Equipment was borrowed from an American construction company on a profit-sharing basis. An electric power line was built across the prairie to supply power and light for the machines, and also to supply the pumping plants when installed.

On June 21, a communication was received by the commissioners from Mr. Duncan, claiming inability to proceed with the work through lack of funds. The Land Settlement Board then took over all financial arrangements, and for the next two years paid all approved bills on the strength of the monthly progress estimates. Some criticism was directed the board for this procedure but it must be pointed out that time was of paramount importance, for property owners had made strong representations to the board to complete the Vedder River canal before the flood period of 1922. The contractors were therefore retained in order to carry forward the work as speedily as possible. The board was secured against possible monetary loss, since they had full control of all machinery, equipment, and monthly progress estimates.

The 20-inch electric suction dredge "Colonel Tobin" was leased from the Puget Sound Bridge and Dredging Company of Seattle, and during September and October exceedingly rapid progress was made on the canal project by this dredge. During the last two months of the year the work was seriously hampered

by severe weather conditions. The engineer and the board made representations to the contractors regarding additional equipment to hasten the work, and in March two additional suction dredges, the "Robson" and the "King Edward" were secured. By April 7th, 1922 the complete diversion of the Vedder River into the canal had been attained.

In May the McGillivray Creek pumphouse was completed. This formed a protection for the East Prairie section, i.e., all lands east of the Vedder Canal. This section contains nearly 8000 acres, a large proportion of which had always been subject to annual flooding. The high water of 1922 was held back, however, and the lands in this area have been available for cropping since that time.

The dykes to protect the West Prairie section were also practically completed before high water, but the problem of damming up Sumas River was still incomplete when an early and exceptionally high freshet in May destroyed construction work costing nearly \$50,000. The West Prairie section was flooded as usual that year.

During the summer the building of the permanent main dam and pumping station for the West Prairie section was carried out on a cost basis by the Marsh Construction Company. Mr. G. P. Moe, assistant engineer to Mr. Sinclair, designed and superintended all construction work on this particular contract. The main pumping station, one of the largest of its kind in Canada, has four large pumps with a combined capacity of 1000 cubic feet of water per second, or over 450,000 gallons per minute.

During the winter of 1922-23 the work on the main dam was pushed forward as rapidly as possible. The necessity of rushing the work added materially to the cost as compared with original estimates, but it was felt that no expense should be spared in the effort to keep out the 1923 high water. The dam across the Sumas River was closed on March 29, thus completing the West Prairie protection system in ample time. This section of the dyking system stood up well under the pressure of the 1923 high water.

The reclamation of Sumas Lake and the proper drainage of the whole area still remained to be completed. The first pumping unit was ready for use at the end of June, and pumping was actually begun on July 4.

At this time the commissioners decided to terminate if possible the contract with the Marsh Construction Company as all the large units under the contract had been completed. The smaller units that remained to be done had been sub-let to the Northern Construction Company. Accordingly the commissioners took over as completed the principal units from the contractors. The units affected by this arrangement included the following: the McGillivray Creek Interception Ditch; Vedder Canal and East and West Vedder Dykes and protection work in connection therewith; North and South Vedder Dykes; Fraser River Dyke; Atchelitz Dyke; Vedder Seepage Ditch and Barrage Dyke; Sumas River Dyke, etc. On all but one of the above mentioned units the yardage and consequent cost was very greatly in excess of the engineer's original estimate.

A reorganization of the engineering staff which took place about this time resulted in Mr. F. N. Sinclair being relieved of his duties as chief engineer, and Mr. G. P. Moe being appointed in his place.

During the remainder of 1923, work on the minor units was continued by the Northern Construction Company. The engineering staff carried out a contour survey of the whole district for assessment purposes. Grass seed was sowed on all the finished dykes and the fencing of dykes and canals was carried out under separate contract.

By agreement dated August 8, 1923, between the Federal Government as Vendor² and the Provincial Government as Purchaser, the "Lake Lands" were turned over to the province. Briefly the conditions of sale were as follows:

1. A nominal sum of \$1.00 to be paid.
2. That the lands shall be effectively reclaimed.
3. That when reclaimed they shall be offered for sale on fair and equitable terms.
4. That the Comptroller of Water Rights of the province shall certify as to their having been effectively reclaimed.
5. That the necessary surveys shall be carried out at the expense of the purchaser.
6. That the province of British Columbia shall assume complete responsibility in connection with the terms of the agreement.

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2. The "Lake Lands" were owned by the Federal Government because they were in the Railway Belt.

A schedule of lands, approximately 12,120 acres, was attached to the agreement.

During the spring of 1924, some 600 acres of the lake marginal lands were plowed and seeded to various crops, and about 6000 acres of lake bottom land were seeded to timothy. The last of the water remaining in the Sumas basin was pumped out on June 26, 1924. The dykes stood the high water of that year without damage though there was some seepage which resulted in a small amount of damage to crops.

However, in the main the crops that year turned out very well considering that none of the land had ever before been broken up. Oats and wheat on the marginal lands ran half a ton of grain to the acre. First crops on the lake bed proper were not a success as the ground was not properly dried out and the soil appeared to be lacking to some extent in nitrogen.

An unforeseen and unfortunate contingency arose a few months after the lake bottom was drained when it was found that a dense coating of willow seed practically all over the former lake bed began to sprout and grow up. This growth of willows, flourishing in a remarkable manner under ideal conditions of growth, choked out most of the timothy and presented for some time a problem with which it was most difficult and expensive to cope.

Some legal difficulties also arose during 1924 to harass the commissioners. There arose the problem of terminating the contract with the Marsh Construction Company. The company made claims for extra work done in dredging in the spring of 1922, while the commissioners made counter-claims for non-observance

of the terms of the contract and for work not completed according to contract. These matters were finally settled by agreement in November 1925 when both of the parties agreed to drop their respective claims. Mr. Sinclair, after his dismissal, also instituted legal proceedings against the commissioners, claiming \$60,000 in payment of plans and information which he alleged had been used by the commissioners and which properly were his personal property. When this suit came to trial in February 1925, Mr. Sinclair was awarded the sum of \$35,000 by the court. The Board commenced appeal proceedings, however, and eventually Mr. Sinclair agreed to settle his claims for \$21,500.

The transfer of crown lands to the province was completed on April 1, 1925 when the Comptroller of Water Rights granted the certificate which was required according to the terms of agreement. The title was obtained from the federal government in July, 1925.

In May, a writ against the Land Settlement Board and the Dyking Commissioners was issued by the Municipality of Sumas, acting on behalf of the Sumas landowners, asking for an accounting and an inquiry into the whole of the reclamation work. As a result of this writ, the provincial government considered it advisable to place the whole matter before the Agricultural Committee of the Legislature during the winter session of 1925. After lengthy hearings at which all interested parties were present, the "Sumas Drainage, Dyking and Development District Act Amendment Act, 1925" was drawn up. The main provisions were as follows:

1. Authority to transfer crown lands to commissioners and conditions of transfer.
2. Repayment of expenditures made by province on development of lake lands.
3. Provision for securities of monies borrowed for all purposes at Sumas.
4. Granting power to commissioners to improve and dispose of lands.
5. Providing method for levying of taxes and validation of assessment roll.
6. Validation of all acts of the commissioners.
7. Provision for appointment of Inspector of Dykes as Dyking Commissioner in place of the Land Settlement Board.

This act was passed by the Legislature on December 19, 1925, and in accordance with the above section, Mr. Bruce Dixon, Inspector of Dykes, took over as from March 10, 1926, the duties of Dyking Commissioner for the Sumas Drainage, Dyking and Development District. Mr. Moe's work having been completed, he left the service of the district.

In accordance with the act, a Court of Revision was held during 1925. There were upwards of 125 objections heard and dealt with by the Court of Revision and the Assessment Roll was amended in accordance with the court's rulings. 12 complainants appealed to the County Court Judge against these rulings. Two of these were upheld by the judge; one was allowed in part and

the rest dismissed.

The basis of this assessment roll as amended by the Court of Revision and by the County Court judge was the division of the land into 10 classifications, "A" to "K" inclusive, each class bearing its own proportion of the cost for capital and maintenance according to benefits derived. Benefits derived were based on the elevation of the land as regards bush, with the exception of "K", which was subject to tax for drainage only. The act authorized levies on capital account against the marginal lands at the full capital cost per acre but at increasing rates of interest, viz., 2% for the first year and increasing at the rate of $\frac{1}{2}$ of 1% per year until the normal rate of 5 $\frac{1}{2}$ % would have been reached, then capitalizing unsatisfied interest charges and increasing the levy to accommodate the greater debt as well as sinking funds requirements.

Levies for 1926 and 1927 were made under the authority of the 1925 Amendment Act, but the present commissioner reviewed the assessment structure just prior to the spring session of 1928 and pointed out the severity of the charges. A study of statistics compiled by the Department of Agriculture of the University of B. C. from actual farms surveys over a period of years in the Chilliwack district, together with the findings of a commission which had investigated United States reclamation services indicated that the greatest construction charge which an acre at Sumas could bear was \$43.53. From this the figure of \$50.00 per acre was arbitrarily adopted. Accordingly

the "Sumas Drainage, Dyking and Development District Relief Act, 1928" was enacted. The following table gives the construction charges which were affected by that act, and by amendments passed in 1929 and in 1936.

Construction Charges per acre.³

Class- ification	Prior to 1928	Relief Act 1928	Amendment 1929	Amendment 1936
B.	\$153.96	\$50.00	\$50.00	\$30.00
C	136.85	50.00	50.00	30.00
D	119.75	50.00	30.00	25.00
E	76.98	50.00	30.00	25.00
F	61.58	50.00	30.00	25.00
G	41.05	30.00	30.00	25.00
H	25.66	20.00	20.00	20.00
I	15.40	15.00	10.00	10.00
J.	10.26	10.26	5.00	5.00
K	5.99	5.99	5.00	5.00

This act however limited the acreage to be made subject to relief to an 80 acre holding. It provided that if the funds arising out of the sale of the Lake area and the reduced construction charges were not sufficient to meet the indebtedness of the district that the full amount of the insufficiency should be chargeable to and repaid out of the Consolidated Revenue Fund of the province.

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3. "A" classification was the lake bottom land against which no construction charge was levied.

An amendment act 1929 repealed the Relief Act of 1928 and extended the relief which it had provided by deleting the 80 acre limitation. The last mentioned enactment is the latest authority concerning the indebtedness upon private lands. In addition it provides for interest at the rate of $5\frac{1}{2}\%$ per annum,⁴ and for the retirement of the debt on January 1, 1969.

Levies for the years 1928, 1929, 1930, 1931 and 1933 were on the above basis. An Amendment Act 1933 postponed the levy on this account for 1932, and a similar amendment in 1935 provided for a postponement of the 1934 capital levy. These postponements have been continued each year up to the present (1937).

An Amendment Act 1930 provided for the levying of maintenance assessments against these lands at a definite rate per acre. These rates in the case of "A" classification amount to \$2.00 per acre per year, for "B" and "C" classifications they are \$1.10 per acre per year, for "D" to "G" classifications to 55¢ per year, for "H", "I" and "J" classifications they are 27½¢ per acre per year. The commissioners felt that this system was unsatisfactory as they were required to meet maintenance requirements, which were always far from definite, from these set levies. Accordingly, at the last session of the legislature (1936), an amendment was passed which gave the commissioner power to levy annually whatever assessments were necessary for the purpose of maintenance.

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4. This was reduced to $4\frac{1}{2}\%$ at the 1936 session of the legislature.
statutes of British Columbia, 1936 (Second Session)
1 Edward VIII c.11.

The total indebtedness of the Sumas Dyking District to the Land Settlement Board as shown by the books of the Dyking Commissioners as at March 10, 1926 was \$3,716,277.85. Items which totalled \$851,616.28 were not in the engineer's estimates at all, one item of \$540,811.26 being accumulation of interest at $5\frac{1}{2}\%$ per annum. There is no question that the engineer greatly underestimated the amount of yardage necessary in the project. Increased costs in this respect were over half a million more than the estimate. Bridges which were estimated at \$13,619 cost \$26,683, practically double. The greatest spread, however, as between estimated and actual costs occurred in the item "Dams and Plant", where the estimate was \$285,000 and the actual cost \$793,997.58, more than half a million on this one item alone.

There is no doubt that the engineer had based his estimates on insufficient data. Subsequent events proved this conclusively. However it was necessary to build a plant which would take care of maximum floods without trouble and which would stand up to the work perhaps for centuries.

As a result of the excessive cost of the scheme over the estimated cost, severe criticism was levelled at the government, and considerable misunderstanding arose and perhaps still exists regarding the Provincial Government's relationship to the project. The late Premier Oliver, during whose regime the work was carried out, persistently maintained his stand that the relationship was simply that of mortgagor and mortgagee, and that the district must pay every cent of its debt.

Looking over the project after a decade since its reclamation, there is no doubt of the beneficial effects which this reclamation work has had on the Fraser Valley. Twenty years ago there lay an 8000 acre area of mud and water too shallow for navigation and probably too deep for the comfort of the duck hunters who were the only ones to get even a few days use of it. In addition it was probably the finest breeding ground in the whole Dominion of Canada for mosquitoes. Today there exists as fine a stretch of farming country as the eye could wish to see; with excellent soil, ample water supply for all purposes, a splendid system of drainage, close to transportation and only 50 miles from an urban community of nearly 300,000 people. It is difficult to conceive of any farm lands in North America more favourably situated.

Chapter VI

Land Settlement

The rich lands of the Fraser Valley have attracted settlers for the last 50 years. The price of land has been comparatively high.¹ This has to some extent retarded settlement, but it has also attracted only the most progressive of the newcomers. In 1907, a government bulletin records the price of unimproved land in the Fraser Valley at from five dollars to twenty dollars per acre, while reclaimed (dyked) land sold at from 40 dollars to 150 dollars per acre.² Three years later, during the pre-war "boom" period, these prices had considerably increased. Unimproved land was then selling at from 10 dollars to 50 dollars per acre while reclaimed land ranged from 50 dollars to 250 dollars.³ In Sardis, in 1910, a section of A. C. Wells' farm, cut off by the British Columbia Electric Railway right-of-way, was sold in acre lots at a top price of 600 dollars per acre. This was of course well-cultivated land suitable for residential property. In 1927 two lots in the heart of Sardis, containing one and one-quarter acres, was bought for a church site at a price of 1000 dollars.⁴ In 1912, farm lands in Dewdney suitable for

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1. It is difficult to make comparisons with prices of land in similar areas in Eastern Canada. In 1833, the Canada Company sold 100-acre parcels of land in the "Huron Tract" at an average price of seven shillings six pence per acre.
See Innes, M. Q., *An Economic History of Canada*, p.137
2. B. C. Bulletin No. 10: Land and Agriculture in B. C., 1907, ed. p.88
3. Ibid, 1910, ed. p.94.
4. Information supplied by Rev. J. H. White, D.D., Sardis, B.C.

dairying were purchased at 90 dollars per acre. The cost of clearing this land, which was not heavily timbered, averaged 250 dollars an acre.⁵ Farmers in the valley were nearly always faced with a heavy expenditure for clearing.

There are still available for settlement thousands of acres of cultivable land. The valley needs settlers who are not afraid of hard work. No definite policy of land settlement (unless the soldier settlements could be so considered) has ever been undertaken by the provincial or federal government. It has been suggested that such a scheme could be well undertaken at the present time to relieve conditions among the farmers of the drought-stricken areas of Saskatchewan.⁶ Such a policy would contribute to the general prosperity of the valley and of the whole province. Neither the provincial nor the federal government has taken official action as yet, but the suggestion is worthy of serious consideration.

Incorporation and Growth of Municipalities

When the Canadian Pacific Railway was completed in 1885, the municipalities of Chilliwack, Langley, Maple Ridge and Surrey had already been incorporated under the Municipality Act, 1872. This act was amended at various times and in 1896 general legislation was passed consolidating these amendments. As a result, the Municipal Clauses Act, the Municipal Elections Act,

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5. Information supplied by Mr. Basil Gardom, Manager of Independent Milk Producers' Co-operative Association.

6. See Editorial, Vancouver Daily Province, Sept.13, 1937.

and the Municipal Incorporation Act were passed.⁷ These confer extensive powers of local self-government upon the municipalities and adequately conserve all corporate rights, powers, and liabilities. This system was largely founded on the experience of other provinces but modifications were made to suit local conditions.

Three classes of municipalities have been developed: urban, district (rural) and village municipalities. An urban municipality may be formed by a community of not less than 100 male British subjects, provided that owners of more than half the value of the land are petitioners. In the case of district municipalities, the requirements are similar except that only 30 resident male British subjects are necessary as petitioners. Village municipalities may be formed where the number of residents do not exceed 1000, but all provisions of the Municipal Act do not apply. Villages are not permitted to incur debt or indebtedness; they have no duties in police administration, or, as a municipality, in school matters.⁸

Under this system, the incorporation of the district municipalities of the Fraser Valley has been a notable development.⁹ The only considerable areas in the valley not so organized at the present time are the districts of Dewdney and Nicomen. The dates of incorporation, given in the following table, are indicative of the growth of the various areas.

7. Statutes of British Columbia, 1896, - 59 Victoria, C 37, C 38, C 39.

8. Manual of Provincial Information, 1930, pp.46, 47.

9. Statutes of B. C., 1920, Village Municipalities Act, 10 George V, C 65.

Date of Incorporation, Area and Population
of Fraser Valley Municipalities

<u>Municipality</u>	<u>Date of</u> ¹⁰ <u>Incorporation</u>	<u>Area</u> ¹¹ <u>in Acres</u>	<u>Population</u> ¹² <u>(1931)</u>
District of Chilliwack	April 26, 1873	65,000	5,802
Coquitlam	July 25, 1891	37,120	4,871
Fraser Mills	March 25, 1913	390	616
Kent	January 1, 1895	47,360	1,207
Langley	April 26, 1873	75,907	5,537
Maple Ridge	September 12, 1874	45,000	4,932
Matsqui	November 21, 1892	54,145	3,835
Mission	June 2, 1892	52,000	2,279
Pitt Meadows	April 1, 1914	14,000	832
Sumas	January 5, 1892	34,000	1,812
Surrey	November 10, 1879	76,000	8,388
City of Chilliwack	February 21, 1908	1,040	2,461
Port Coquitlam	March 7, 1913	6,200	1,312
Village of Abbotsford	February 22, 1924	160	510
Hope	April 6, 1929	1,200	374
Mission	January 8, 1923	821	1,314

The growth in population during the last half century has been steady. The following tables have been prepared in an at-

10. Information supplied by office of Inspector of Municipalities, Victoria, B.C.

11. Annual Report of Inspector of Municipalities, 1935

12. Seventh Census of Canada, Ottawa, 1931, Vol.II, p.104

tempt to show the characteristics as well as the number of the people who have been attracted to the urban and rural communities of the Fraser Valley.

Growth in population of Fraser Valley, 1886 - 1931.¹³

<u>1886</u>	<u>1896</u>	<u>1906</u>	<u>1916</u>	<u>1921</u>	<u>1931</u>
3,300	9,500	13,300	26,400	37,000	49,000

Population Classified by Sex: Canadian born, British born, and foreign born, 1931.¹⁴

<u>Canadian Born</u>		<u>British Born</u>		<u>Foreign Born</u>	
<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
15,400	12,800	6,800	4,900	5,600	3,500

Population classified according to principal racial origins, 1931.¹⁵

British races- - - -	33,200
European races - - -	11,100
Asiatic races- - - -	4,050
Indians- - - - -	1,470
Unspecified- - - - -	180

These tables prove that the population of the Fraser Valley is predominantly of the Anglo-Saxon race, and that the majority of these are Canadian born. It is such stock which has built up the valley.

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*13. Figures for 1931 are approximately correct because for the first time the census was taken according to arranged divisions. Census division 4(a) is the Fraser Valley as far east as Keefers. Population for 1921 was estimated on that basis by Bureau of Statistics, Ottawa, and is also approximately correct. Previous censuses were taken by electoral districts, the boundaries of which changed with every census. The foregoing estimates previous to 1920 were based on school population as being a reliable index. The ratio in 1921 was 1:5.5, and this ratio was used in the above table.

14. Seventh Census of Canada, 1931, Ottawa, 1931, Vol.II, pp.246,247.

15. Ibid, pp. 484, et seq.

* P.T.O.

The ratio of 1:5.5 was obtained in the following manner:

The school population of each municipality, as given in the annual Report of B.C. Schools for 1920-1921, was compared with the population of the municipality as given in the Seventh Census of Canada, 1931, Vol. II, p. 104. The average of the ratios of eight municipalities (supra, p. 125) was then calculated as being 1:5.5 (There are no schools conducted in the municipality of Fraser Mills, and ratios for Pitt Meadows and Coquitlam were disproportionately high, in the latter probably due to the fact that figures include the inmates of the Mental Hospital at Esson dale.)

School populations (infra, p. 134) were calculated as exactly as possible, and the resulting estimate of total population has been given in round figures.

G.B.W.

Indian Reserves.

When British Columbia entered confederation in 1871, provision was made for the native races who are wards of the Dominion of Canada. Reserves of sufficient extent to enable the Indians to make an independent living were conveyed by the province to the Dominion. These are held inviolate for them by the officials of the Indian Department. The land is subdivided into plots which Indians may hold and own in severalty, but no property belonging to the reserve may be sold without permission of the federal government, nor can reserve properties be seized for debt.¹⁶

Indians are not necessarily confined to the reserves. They may move about and seek employment where they can find it. The Indians of the Fraser Valley own some rich agricultural lands and engage in mixed farming after a fashion. During the fishing season, however, the majority of them is employed in that industry; particularly was this so prior to 1900. Women worked in the canneries, cutting and cleaning fish, while the men were employed in the boats. In the autumn there was a general migration to the hop-fields of Sardis and Agassiz. Until recent years, Indians had almost a monopoly in the work of picking hops. These two industries, fishing and hop-picking, provided remunerative employment during the summer months for a majority of the Indians of the valley.

There are 62 reserves located in this district. Most of these have frontage on the Fraser River or its tributaries,

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16. Gosnell, R. E., B. C. Year Book, 1897, p.175.

several being on islands. These reserves contain 21,395 acres of land, about 10% of which are under cultivation.¹⁷ The total value of real and personal property belonging to the Indians of the valley is nearly 1,000,000 dollars.¹⁸

Soldier Settlements, 1919.

Faced with the problem of rehabilitating demobilized soldiers, the federal government established the Soldier Settlement Board of Canada early in 1918. The Soldier Settlement Act of 1917 was described as "An Act to assist returned soldiers in settling upon the land and to increase agricultural production." Under this act loans up to 2,500 dollars were granted to assist in the re-establishment of returned men. In 1919, an amendment to the act provided for a loan up to 5,000 dollars to purchase land, the settler paying 10% of the purchase price. In addition the settler might be advanced up to 2,000 dollars for live-stock and equipment, and 1,000 dollars for permanent improvements. All loans bore interest at 5%.¹⁹

District boards were setup for the purpose of passing on all applicants for loans to purchase land, stock and equipment. Agricultural experts were appointed to advise and supervise settlers. Special concessions in the way of transportation rates, allowances while training, and courses for soldiers' wives were given these settlers and in Canada nearly 25,000

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17. Information supplied by Indian Agent's Office, New Westminster, B.C.

18. Manual of Provincial Information, 1930. p.78.

19. Report of Soldier Settlement Board of Canada, Ottawa, 1921, p.27 et seq.

loans were granted.

In British Columbia, a favoured location for settlement was the Fraser Valley. There were 802 settlers who purchased farms under this scheme, mainly in the municipalities of Chilliwack, Surrey, Langley and Matsqui. The average size of these farms was 29.4 acres and the average price paid for land was 92.45 dollars per acre.²⁰

This influx of soldier settlers to the valley did not mean that new territory was opened up, for all purchases of land were restricted to those farms which had been partially under cultivation. Soldier settlers however were encouraged to clear new acreage for cultivation, and in 1920 an increase of about 25% in land under cultivation was made.

It would have been too much to expect that all these soldier settlers would be successful. Death and recurring sickness due to war disabilities removed some of them. Poor crops and adverse market conditions discouraged others, while there were a good many who were unfitted, after their war-time experiences, for the hard toil necessary to make a success of farming. Adjustments had to be made in disposing of the farms which reverted to the Soldier Settlement Board. Some were sold to civilian purchasers. Some were taken over by British families under a scheme of Empire settlement by which, during 1926 and 1927, nearly three thousand British families were brought to Canada under the auspices of the Canadian and British governments.

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20. Report of Soldier Settlement Board of Canada, Ottawa, 1921, p.134.

The latest information concerning the loans made in the Fraser Valley show that there are 364 of the 802 original soldier settlers who are still in possession of their farms. Of these approximately 20% have repaid their loans in full.²¹ This average is somewhat better than the Dominion average which is 12%.²² Civilian purchasers have taken 312 of the holdings, while British families have taken 54. There are 72 parcels of land which are leased pending resale. These figures are considered quite satisfactory by the officials in charge. During recent years the government has adopted a policy of reasonable leniency in the matter of recovery of the loans, and since 1933 has offered a dollar for dollar bonus on payments for arrears or on any instalment due between 1933 and 1938. This legislation applies to all settlers, soldiers and civilians alike, who were indebted in respect of any contract made prior to January 1st, 1933.²³ The government realizes that any foreclosure proceedings on the sole ground of inability to pay would merely mean a shifting of the problem to some other department of the government.

The whole policy of soldier settlement was a great human experiment for which a satisfactory measure of success can be claimed. Many of the original soldier settlers in the Fraser Valley have not only made good on their farms, but have also played an important part in the life of their communities.

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- 21. Information supplied by Mr. G. Johnston, Asst. Superintendent, Soldier Settlement Board, Vancouver, B.C.
 - 22. Eleventh Report of Soldier Settlement Board of Canada, Ottawa, 1936, p.3.
 - 23. Ibid, p.4.

Mennonite Settlements.

Recent settlements by Mennonites afford an example of community settlement which has been rare in the history of the Fraser Valley. These people belong to a religious body who left Russia in the last decades of the nineteenth century because they were refused exemption from military service. Many colonies were subsequently established in various sections of United States, in Ontario, and in the prairie provinces.

During the summer of 1927, Abram Buhr, a lawyer, and P. H. Neufeld, a teacher, both of Winnipeg, visited the Fraser Valley to investigate a tract of land at Yarrow which had been offered for settlement. These men were very favourably impressed with the agricultural possibilities of the valley. They reported thus to their compatriots. Several families moved to Yarrow the first year, and the settlement soon increased.²⁴ The last official census (1931) gave the number of Mennonites in the valley as 849, nearly 80% of whom were at Yarrow. Since that time the number has increased and it is now estimated that there are at least 2000, with the greatest number still in Chilliwack municipality.

These people have adjusted themselves to the economic life of the valley with little difficulty. They will accept work of any kind. The only complaint against them is that they are too ready to undercut wages. Some of the younger generation are entering the professions. They are an industrious people and

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24. Information supplied by Rev. Mr. Neufeld, Yarrow, B.C.

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will no doubt make a definite contribution to the material progress of the valley.

Chapter VII.

The Development of Social Institutions.Public Schools.¹

The development of educational facilities in the Fraser Valley has steadily kept pace with settlement. Indeed, there is probably no more accurate index of the time and place of settlement than the record of the building of school-houses. In the main, these schools have been the traditional one-roomed schools of rural districts, though many of them soon expanded into graded schools. The next step was to become a "superior"² school, and then a high school.

The first high school in the valley was opened in Chilliwack in 1903 with an enrolment of 32 pupils. The increase in high schools has been especially marked in the post-war period. This has been a general feature in the growth of educational facilities since 1919. The latest annual report (65th) shows that in the valley there are 11 high schools, containing 55 divisions and having an enrolment of 1623 pupils. Following Chilliwack, the order and date of their establishment is as follows: Agassiz (1915), Matsqui (1916), Mission (1916), Langley (1919), Surrey (1919), Maple Ridge (1920), Mt. Lehman (1922), Sumas - Abbotsford (1922), Port Coquitlam (1922) and Dewdney (1929).

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1. Statistics in this section were obtained from 15th, 25th, 35th, 45th, 55th, and 65th Annual Reports on B. C. Schools.
2. A "superior" school is an elementary school containing one or more grades of high school.

The modern trend in educational administration here, as elsewhere, is towards consolidation of school districts and the establishment of junior high schools. An experiment which should prove of considerable value was begun in 1935, when the school administrations of Matsqui, Sumas, and Abbotsford Districts and Abbotsford Village consented to unite to form an experimental area under the control of a director appointed by the Department of Education. This area was to be administered by the department for three years, with the existing trustees retained as an advisory board. A similar organization in the Peace River Block has proved successful and the success of the present experiment might help to solve some of the difficulties faced by rural school boards. To increase, or even to maintain, the efficiency of the school system without increasing the budget is a problem which has had to be faced since 1929. With low prices for dairy and farm produce, it has been a difficult time for rural school boards. They will no doubt watch the experiment at Abbotsford carefully.

The following table is appended to show the growth of the school systems in the valley for a period of 50 years.

School Enrolment 1886 - 1936.³

<u>Year ending</u> <u>June 30</u>	<u>No. of</u> <u>Schools</u>	<u>No. of</u> <u>Divisions</u>	<u>Total</u> <u>Enrolment</u>
1886	16	16	604
1896	50	53	1,731
1906	69	77	2,420
1916	106	177	4,811
1926	121	252	7,228
1936	129	329	10,625

3. Includes high school enrolment. Early figures are only approximately correct owing to fact that schools were not listed by municipalities.

Indian Schools.

There are two residential Indian schools in the Fraser Valley that have done, and are doing, good work in educating Indian children. They are St. Mary's Mission at Mission, and Coqualeetza Residential School at Sardis, near Chilliwack. These schools enroll boys and girls from 6 to 16 years of age from the near-by reserves. In general, the policy of these schools is to give academic training to all pupils for half-a-day while in the other half-day the boys learn farming, carpentry and other like pursuits. At the same time, the girls are taught cooking, sewing and general housework. Of late years, the government, by means of frequent medical inspections, has very wisely paid particular attention to the health of all pupils.

These schools were originally established under church auspices, but they and other similar institutions are now maintained by the Federal Government by means of a per capita grant.

St. Mary's Mission, one of the oldest in British Columbia was established in the 1860's by Father Fouquet, O.M.I. The first buildings were erected on what is now the right-of-way of the Canadian Pacific Railway, but in 1885 the present school, convent and church was moved to the site near Mission on which it now stands.⁴ There was accommodation for about 130 pupils, usually about equally divided between the sexes. This attendance was fairly well maintained for some years, but in 1936 an

4. Pamphlet published by Municipal Council, Mission, 1928

additional building increased the accommodation by 50 pupils.

The enrolment at the end of June, 1937 was: boys - 76; girls - 99.⁵

Coqualeetza was developed from an Indian day school which was organized in 1880 by Rev. C. M. and Mrs. Tate, pioneer Methodist missionaries. This school was established on the Squihala Reserve near Chilliwack Landing, but in 1886 it was moved to its present site at Sardis and soon developed into a residential school. In 1891 this home was destroyed by fire and two years later was replaced by a brick building accommodating 100 pupils. By means of several small outbuildings used as boys' dormitories, Coqualeetza had an average attendance of 150 or more for many years. In 1924 the old building was condemned and demolished. It was replaced by the present fine brick building on the same site.⁶ The enrolment at this school in June, 1937, was: boys - 126; girls - 107.⁷

There is no doubt that Indian children have received excellent training in these residential schools, but a difficulty has always existed in their adjustment, after graduation, to home conditions on the reserves. No doubt many of them have reverted too easily to the general squalor around them. On the other hand, there have been a few outstanding characters trained in these schools who have done much for their people.

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5. Information supplied by Indian Agent's Office, New Westminster, B.C.

6. Information supplied by Rev. G. H. Raley, D.D., former Principal of Coqualeetza.

7. Information from Indian Agent's Office, New Westminster, B.C.

Churches.

Religious denominations were not long in following up settlement in the Fraser Valley, and their record of expansion is one that parallels closely the growth of settlement. Though there were very few church buildings erected prior to 1885, divine service was held more or less regularly wherever there were a few who could gather together. Sometimes this was in a home, but frequently, too, school buildings were used for worship. The early annual reports of the schools of British Columbia contained this information till 1898, and show that in 1886 there were seven out of 16 school buildings used for divine worship. Ten years later 20 out of 50 schools were so used, and others were used for Sunday Schools.

Early records of the churches are somewhat incomplete. Even the denominational year books fail to give exact information because returns were not always sent in. The following records of the Anglican, Presbyterian and Methodist Churches for the years 1886, 1911, and 1936 give a picture of the growth of the churches during a period of 50 years.

The Anglican church in 1886 was represented by churches at Chilliwack and Maple Ridge, both of which were among the first churches in the valley. No record of the number of members in either of these is available. By 1911 the number of churches had increased to 15 with approximately 2000 members and 750 communicants. In 1936 there were 26 churches with a total membership of 5205 including communicants.⁸

8. Information obtained at Synod Office, Diocese of New Westminster.

The Presbyterian Church in 1887 had churches at Chilliwack and Fort Langley, with 63 families and 47 communicants on the roll as members. By 1911 there were 9 pastoral charges with 30 other preaching places. There were 550 families as members and 510 communicants. In 1925, the year of union with the Methodist and Congregational Churches, there were 13 pastoral charges and 20 other mission fields. Families as members numbered 960 with 1035 communicants.⁹

The Methodist Church in 1886 had four pastoral charges of which one was Indian. In addition there were 20 preaching places of which five were Indian. The total membership at that time was 266, of which 97 were Indians. By 1911 there were 12 pastoral charges with 26 preaching places. The membership total was nearly 1000. In 1925 there were 17 pastoral charges and 31 preaching appointments with a total membership of 1200.¹⁰

When the union of the churches took place in 1925, only the most suitable churches were used for pastoral charges. As a result, the United Church in 1936 had 22 pastoral charges of which one is Japanese and one Indian. There were 58 preaching places of which 10 were Japanese and two Indian. There was a total membership of 2561, of which 125 were Japanese and 66 Indian.¹¹

The devoted labours of the pioneer ministers have not gone unrewarded. In spite of difficulties in transportation and of

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9. Statistics compiled from Minutes of General Assembly, 1888, 1911, 1925.

10. Information supplied by Rev. J. H. White D.D., former Supt. of Methodist Missions for B.C.

11. Ibid.

financial worries, they laid the foundations for the churches of today.

Hospitals.

The city of Chilliwack and the villages of Abbotsford and Mission now boast small but well-equipped hospitals. These give adequate service to the residents of the eastern half of the valley, while the city hospitals of New Westminster and Vancouver accommodate residents of neighboring municipalities. There is no doubt that in time these municipalities will make provision for their own hospital services. Langley has already considered the possibility of such service, but no definite steps to that end have been taken yet.

The Chilliwack General Hospital was the first to operate. It was officially opened on February 12, 1912. The idea of a hospital had originated some years before in the minds of several public-spirited citizens, and a fund was started for the purpose of building and equipping a hospital. A site was presented and various means taken to raise funds. The original unit was built at a cost of \$10,000 and opened free of debt.¹² There was accommodation for 13 patients but in two years' time a new wing, which doubled the accommodation, was added. In 1924 a nurses' home was built and an X-ray machine and other equipment added.¹³ The accommodation is for 28 beds. The staff comprises a matron and five or six nurses. This hospital has fulfilled a long-felt want.

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12. The Chilliwack Progress, March 6, 1912.

13. Ibid. May 8, 1924.

The Matsqui-Sumas-Abbotsford General Hospital¹⁴ and the Mission Memorial Hospital¹⁵ are similar in many respects. They were both built by public subscription shortly after the war, and are both out of debt. They are both well-equipped for surgical cases and for emergencies. The Mission Memorial Hospital is somewhat larger than the Abbotsford Hospital, having accommodation for 21 patients as against 17 for the latter. All three hospitals are staffed by graduate nurses only.

Fraser Valley Union Library.

Library facilities in the Fraser Valley communities had been practically non-existent previous to 1930. By a stroke of good fortune such facilities were given them in that year. As a result of a survey conducted by the provincial government through its Library Commission, assisted by the professional body of librarians, the Fraser Valley was chosen as one of three regions in North America to be used as a testing-ground for a new idea in rural libraries. The Carnegie Corporation of New York had placed \$100,000 at the disposal of the B. C. Library Commission so that the scheme might be tried out for five years. It was hoped that, by the end of the period, the library would be adopted by the municipalities.¹⁶

The service was initiated on March 1, 1930, under the direction of Dr. Helen Stewart of the Library Commission. Chilliwack was chosen as the main depot and distributing centre

14. Information re Abbotsford Hospital from the Matron, Miss Archibald.

15. Information re Mission Hospital from J. L. English, Druggist, Mission.

16. The Chilliwack Progress, December 12, 1929; March 13, 1930

for the 20,000 books which were to be maintained. A truck with a capacity of over 800 books was fitted up as a travelling library. It made a complete round trip, down one side of the valley and up the other about every two weeks.

In addition to the main depot at Chilliwack, branch libraries were maintained at Abbotsford, Langley, Cloverdale, Ladner, Haney and Mission. These were open to the public from 15 to 27 hours per week and 1000 or more books were kept on the shelves. Three sub-branches - at Hope, White Rock, and Port Coquitlam - were open from four to eight hours a week. Deposit stations with 100 to 200 volumes were maintained at eight different centres. In addition 22 school libraries were assisted and there were 55 or more points of call for the library van. Custodians of the branch and sub-branch libraries were paid, but in all other places the work was carried on by voluntary labour.

This program was carried out very successfully. People from isolated sections quite cheerfully walked miles and waited hours in order not to miss an opportunity for an exchange of books. In September 1932, after two years operation, 15,637 adults and 700 school children had registered as members. During the first six months of 1932, these members had borrowed 130,137 volumes.¹⁷ Library assistants noted a rapid turn-over of volumes and a preference for non-fiction rather than fiction in the reading tastes of various sections of the valley.

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17. Vancouver Daily Province, November 27, 1932.

The municipalities took over the library on October 1, 1934, as the original grant of \$100,000 had been expended before the five-year term was up. A board of management, consisting of representatives of the various municipalities and school districts within the library area, was elected in order to carry on the work. Each municipality is assessed on a basis of 35¢ per capita total population, but the method of raising the respective quotas is a matter of municipal jurisdiction.

The annual report for the year ending December 31, 1936 was very encouraging. A total of 3322 new volumes was added at a cost of \$3501. There were 133 library agencies which included school libraries and book-van stops. Registration of active readers increased by 3365 over the previous year, bringing the total to 19,330. The total circulation of books amounted to 225,555 volumes, giving an average circulation of 11.6 volumes per member for the year.¹⁸

The compactness of the valley, together with its system of good highways were factors in the choice whereby residents were provided with library facilities for five years at no expense. The results have justified that choice, and there can be but little doubt but that the people will maintain a service which they lacked for so many years.

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18. Annual Report of Fraser Valley Union Library,
December 31, 1936.

Chapter Vlll

Communications

The Fraser Valley was particularly fortunate in having telegraph communication with the outside world at a very early date. This was due to the fact that the famous overland telegraph line was built through Chilliwack in the 1860's, as part of the system that was to connect Europe and North America. The successful completion of the Atlantic cable in 1866 resulted in the overland route being abandoned. However, the section of the line in British Columbia was taken over by the provincial government in 1871, and was operated as a commercial telegraph line.¹ John T. McCutcheon, one of Chilliwack's pioneers, was the telegraph operator at that point for some years.

Following the completion of the Canadian Pacific Railway, the government line west of Ashcroft was absorbed by the railway company. Sections of the line were rebuilt and improved and have formed part of the C. P. R. telegraph system since that time.² Chilliwack has thus been in telegraphic communication with outside points almost since the inception of settlement there. Other centres of settlement in the valley were not so fortunate. It was not until 1891 that the reeve of Langley was able to convey greetings to the first citizens of Chilliwack and of Vancouver by way of initiating telegraphic

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1. Manual of Provincial Information, 1930, p.214

2. Ibid, p. 215.

service there.³ Many communities never enjoyed such service, for the introduction of the long-distance telephone, some five or six years later, relegated the telegraph to a position of secondary importance.

British Columbia Telephone Company.

In 1896 the first telephone lines were laid in the valley, and on April 6 of that year Chilliwack was connected with Vancouver and New Westminster.⁴ This line was built by the New Westminster and Burrard Inlet Telephone Company, one of the pioneers in the province. At this date, it was expected that connections would be made at the following places: Sumas, Abbotsford, Aldergrove, Langley Prairie and Fort Langley. Thus was the first step taken in building up a system which today covers the whole valley with a network of wires.

In 1903 the provincial legislature granted permission for several companies in the province to amalgamate with the New Westminster and Burrard Inlet Telephone Company in order to protect their investments and the better to meet the growing demands for extension of service.⁵ In the next year the British Columbia Telephone Company came into existence.

This company has been responsible for most of the extensions of telephone service throughout the Fraser Valley, but there have been three independently-owned companies which have

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3. Chilliwack Progress, June 4, 1891.

4. Ibid, April 8, 1896.

5. Gosnell, R. E., B.C. Year Book 1911/14, p.303.

been absorbed into the senior system.

The first of these companies to be formed was the Chilliwack Telephone Company Limited, which began operations on April 1, 1908 with a directory containing 107 names.⁶ There were at this time a few business phones in Chilliwack which had been operated by the B. C. Telephone Company for long-distance calls, but these were taken over by the local company at the time of its organization. For ten years the Chilliwack Company experienced a steady growth in business, but received a severe setback at the time of the 1917 "silver thaw". So many poles and so much wire were brought down at that time, that the company was forced practically to rebuild their entire lines of communication. In 1928 the company was bought out by the B. C. Telephone Company. \$70,000 was spent the next year in building a new exchange and in installing automatic equipment.

The two other independently-owned systems in the valley were those of the Mission City Telephone Company, Ltd., and the Huntingdon Rural Telephone Co. The former had been in operation since 1909, and at the time of being taken over by the B. C. Telephone Company in December, 1929, was giving service to 384 subscribers. The latter system, serving the Sumas area, was taken over on August 1, 1931, thus unifying the lines for the whole valley.⁷

One of the greatest periods of expansion occurred during

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6. From information supplied by Mr. P. H. Wilson, Manager of Chilliwack Exchange, and formerly manager of Chilliwack Telephone Company, Limited.

7. Information supplied by Mr. N. F. Pullen, Publicity Director, B. C. Telephone Company.

the "boom" period of 1910, when exchanges were put in at Agassiz, Milner, Hammond and other centres.⁸ These gave local service as well as long-distance connections to the coast cities and intermediate points.

The policy of the company has been to extend the service as widely as possible, and there are few points that are without telephone service today. Moreover, the company is steadily improving service and equipment. Aldergrove, Chilliwack, Hammond and Hope exchanges have automatic equipment today, and it is the intention of the company to install such equipment in the valley exchanges whenever it is necessary to improve the service.⁹

British Columbia Power Corporation Limited.

The topography of the north side of the Fraser Valley has provided ideal conditions for the development of hydro-electric power. East of Pitt Meadows the mountains rise quite abruptly from the river to a height of over 3000 feet. Nestling in the valleys lie Alouette (named Lillooet on early maps) and Stave Lakes, the later draining into the Fraser by the Stave River. Alouette lies at an elevation of 482 feet and the Stave at 340 feet. The drop from Stave Falls plant at the southern end of the lake to the new plant at Ruskin is about 130 feet.¹⁰ During the last 35 years, the growth of the coast cities and the Fraser Valley has made it necessary to utilize these resources of water

8. The British Columbian, New Westminster, August 22, 1910; October 26, 1910.

9. Information supplied by Mr. N. F. Pullen, Publicity Director, B. C. Telephone Co.

10. From small descriptive pamphlet, Alouette Power Development, published 1928, by B. C. E. R. Co. Ltd.

power. These projects have very materially assisted in the development of the entire Lower Mainland.

The first piece of work was begun in 1902 on the Coquitlam-Buntzen power plants by the British Columbia Electric Railway Company. This whole project was not completed till 1914, as almost continuous enlargement of the plant was necessary.¹¹ When finished, this project consisted of two power houses on the north arm of Burrard Inlet about 15 miles from Vancouver. The water supply for these two power houses comes from Lake Coquitlam by means of a tunnel 13,200 feet long. The combined capacity of these two plants is 64,000 horsepower.

About 1911, an important competitor, the Western Canada Power Company, entered the local field.¹² A fine power station was built at Stave Falls. It was placed in operation on January 1, 1912, the company selling electrical energy in bulk to the B. C. Electric Railway Company and to the city of Bellingham. The depression following the "boom" years left the Western Canada Power Company in financial difficulties. The war years added in no small measure to these difficulties.

Faced with the prospect of expansion immediately after the war, the B. C. Electric Railway Company was forced to look for a power supply greater than that contracted for with the Western Canada Power Company. The logical source of such a supply was the Stave River, the more so as the B. C. Electric Railway

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11. Vilstrup, A., "Early History of the British Columbia Electric Power System in the Lower Mainland of B. C.", a pamphlet containing an address given March 20, 1936.

12. Ibid.

Company held water rights on Alouette Lake, the best development of which would be through Stave Lake and River.

The natural solution of the whole problem lay in the purchase of the Western Canada Power Company. This was accordingly done, the new management becoming effective on January 1, 1921, under the name of the British Columbia Power Corporation Limited.

This consummation added 39,000 horsepower to the capacity of the old company, but plans were immediately laid to improve the plant. The construction of a new dam to provide greater hydraulic operating head, the rebuilding of existing generators to provide greater capacity, and the installation of new generators - all this was completed by 1925 and raised the capacity of the plant to 79,000 horsepower.

Concurrently with the work at Stave Falls, construction was begun on the Alouette Lake project. This lake lay in a narrow valley west of Stave Lake and elevated 140 feet above it. The project comprised the building of a dam at the south end of the lake, and the driving of a diversion tunnel at the north end of the lake so as to connect with Stave Lake. This tunnel is 3600 feet long, 15 feet in diameter, and connects with a power plant on the west side of Stave Lake about 11 miles above the Falls. This new plant completed in 1928 provides an additional 12,500 horsepower of electrical energy. The most interesting feature of the plant is that it is completely automatic in operation. This was desirable because of the isolation of the plant and in addition it was designed

to carry a steady load. It is operated from Stave Falls.¹³

The latest and final step in the realization of the Stave-Alouette project was the construction, during 1929-1930, of the plant at Ruskin, three and a half miles below Stave Falls. Here a single huge generator, one of the largest on the continent, produces 47,000 horsepower.¹⁴ Ultimately four such units will be installed, the second of which is expected to be in operation next year (1938).¹⁵

The construction of the Ruskin plant offered several engineering difficulties not the least of which was the diversion of the Stave River from its natural channel to allow the foundations of the dam to be laid. This was successfully accomplished by means of a huge wooden flume, 36 feet wide and 12 feet high. The power house itself embodies all the most modern features of hydro-electric engineering. Ultimately, with the completion of the Bridge River plans, the Ruskin plant will accommodate the heavy peak-load periods.

Radio Station C H W K ¹⁶

The progressive little city of Chilliwack has the only radio broadcasting station in the Fraser Valley, Station CHWK, which began operating in the summer of 1927. The guiding spirit

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13. Pamphlet: "The Power System of the British Columbia Power Corporation, Limited." published by B. C. E. R. Co. Ltd., Vancouver, 1932.

14. Souvenir booklet on Ruskin Power Development, 1930

15. Information supplied by Publicity Bureau, British Columbia Power Corporation Limited.

16. Information supplied by Mr. Casey Wells, manager Station CHWK.

in this project was Mr. Casey Wells, the grandson of one of Chilliwack's earliest and most respected pioneers. In company with Mr. Jack Menzies, a Chilliwack merchant, Mr. Wells organized the Chilliwack Broadcasting Company, Limited. With an assigned frequency of 1210 kilocycles, they began their efforts in a very modest way. The equipment was a five-watt ship's transmitter, and the station was "on the air" for the noon hour only.

The station gradually grew, however, as it filled a real need in the eastern end of the valley. Vancouver stations were too weak at that time to give good reception up the valley. In 1930 the power input was stepped up to 100 watts, and the broadcasting frequency changed to 665 kilocycles. The station was on the air then for five or six hours daily, and employed local talent in some of its programs.

In 1933 several changes in organization took place. Mr. Menzies sold out his interests in the company to Mr. Ronald Wells, who thus became joint owner with his brother. In that year too the station agreed to handle the programs of the Canadian Radio Commission, and were assigned the present frequency of 780 kilocycles. The station now carries about 85% of the Canadian Broadcasting Corporation's network programs, being on the air daily for 11 hours. By some freak of radio reception, this comparatively weak station has been heard at times at the four corners of the continent, and even as far as Australia. Letters in the office testify to these facts.

A highlight in the life of this young station occurred during the storm of January, 1935. Heavy snowfall for three

weeks was followed by rainfall on January 21st. Freezing ground temperatures caused a heavy coating of ice to form on all exposed surfaces. Poles and wires snapped under the weight and by nightfall all power, telephone and telegraph services were suspended. The eastern end of the valley was completely isolated for eight days.

A small emergency battery operated transmitter was assembled by the staff of CHWK and by noon Thursday, January 24, contact with Vancouver had been re-established, Mr. Jeff Bradford acting as wireless operator.¹⁷ This was soon replaced by more complete equipment owned by Mr. Earl Streeter, a local short-wave amateur. This equipment was placed in the office of the Chilliwack Telephone exchange and operated by the company's emergency power plant. Mr. Streeter did yeoman service in handling important messages until the power service was restored on January 28. "Ham" radio operators all over the province, and indeed, in many parts of the continent, did invaluable service in relaying messages during that week.

In lieu of their usual broadcasts the staff of CHWK gathered news items from all possible sources, typed them for the mimeograph machine, and distributed leaflets daily in the local stores. It was a fine example of public service under most unusual circumstances.

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17. Souvenir booklet issued by CHWK, January, 1935.

Newspapers.

Journalistic enterprise in the Fraser Valley has been confined to the publication of weekly newspapers which cater to local subscribers. The daily papers published in Vancouver and the weekly issue of the British Columbian (New Westminster) have always had a good circulation in the Fraser Valley. In early days these papers were always a day or two late, but recent improvement in transportation facilities have ensured delivery of the papers on the date of publication.

The first newspaper of the valley was the Chilliwack Progress, founded on April 16, 1891 by the late W. T. Jackman. Though there have been times when emergency measures have been necessary, the Progress boasts an unbroken record of continuous publication.¹⁸ During the flood of 1894, raised planking had to be put in the shop to permit the staff to work. / During the "silver thaw" of 1917, gasoline engines were used to set the press owing to lack of power service, while in 1933 for the same reason, one issue of the newspaper was printed in New Westminster. The storm of January, 1935 struck so suddenly that the record was maintained only by printing a much-reduced paper on the old hand-operated machines.

The Progress has been in several hands since its establishment, but for the last 12 years it has been under the able direction of Mr. C. A. Barber. Several times he has won the

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18. Editorial, Chilliwack Progress, January 24, 1935.

cup presented annually by the Canadian Weekly Newspaper Association for the best Canadian weekly with a circulation of 1000-2000.

Other newspapers published at present, with the dates of their establishment, are as follows:¹⁹

Fraser Valley Record (1908) published at Mission.

Maple Ridge and Pitt Meadows Gazette (1919) published at Port Haney.

Abbotsford, Sumas and Matsqui News (1922) published at Abbotsford.

Surrey Gazette (1923) published at White Rock.

Coquitlam Herald, published at Port Coquitlam.

There have been other valley newspapers published at various times but they lie today, among many others in the "bone-yard" of British Columbia's journalistic efforts. With the competition from the city newspapers, it would seem unlikely that there will be many more attempts to publish local weeklies throughout the valley.

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19. Manual of Provincial Information, 1930, pp.290-291

Chapter IX

Conclusion

The changes which have been wrought in the Fraser Valley with the passage of more than a half century have been little short of marvellous. Few areas in Canada have seen such rapid growth. The development from a few small settlements and isolated homes in the forest to the compact, homogeneous district of today is one which has been compassed largely within the lifetime of many who are still carrying on their work of gaining a livelihood from the soil. During that period the valley has been knit together by four great railway systems and two important highways. The river has been spanned by three great bridges, the last of which is just being completed. All the modern conveniences have been made available to residents of the valley. They enjoy most of the advantages of urban life with the freedom of rural life.

Not only has nature been kind to those who would wrest a livelihood from the resources of this region, but she has also provided them with the means of recreation and sport. Lakes and rivers abound in game fish, while the wily pheasant and duck provide sport for the hunter.

There is no need to leave the confines of the valley to enjoy a pleasant vacation, whether it be at the seaside or at picturesque mountain lake. In the municipality of Surrey are the wide sandy beaches of Semiahmoo Bay, where the summer resorts of Crescent and White Rock have been developed within the

last three decades. Indeed the latter is more than a summer resort now, boasting a permanent population of 1200 residents. At the other end of the valley, Cultus Lake has become an attractive spot for those who prefer mountain scenery and fresh-water bathing. This area was acquired in 1923, when the people of the city and municipality of Chilliwack voted overwhelmingly in favour of a bylaw whereby 63 acres of choice camping property was purchased from the Dominion Government and certain timber interests.¹ In 1925 the Dominion Government made a formal grant of the park site and foreshore of Cultus Lake to the township and city of Chilliwack.²

More than passing mention should be given to the internationally known health resort at Harrison Hot Springs, near Agassiz. Here, at the southern end of Harrison Lake, are two hot springs which gush from solid rock. One of these predominates in sulphur at a temperature of 155°F., and the other, in potash at 130°F. The therapeutic value of these springs is undoubted, even the Indians having recognized from earliest times their health-giving qualities. The first record of their discovery by white men is contained in the Victoria Gazette of December 30, 1858.³

About 1885, the well-known St. Alice Hotel was constructed

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1. Chilliwack Progress, Spet. 6, 1923.
2. B. C. Gazette, 1925, pp. 849; 1342.
3. Vancouver Daily Province, August 2, 1925.

on a site immediately adjacent to the springs. For 35 years this hostelry attracted guests from all over the continent. Even as early as 1890, the list of guests showed that many came from the coast cities of Seattle, Tacoma and San Francisco, while others came from the cities of Winnipeg, Toronto, Montreal and Hamilton.⁴

In July, 1920 a fire razed the old hotel to the ground, fortunately without loss of life. It was not till about five years later, that a syndicate bought the site and began the erection of the handsome brick hotel which now occupies the site of the old St. Alice Hotel. One of the distinctive features of the present structure is a large natatorium where one may bathe in the waters from the hot springs. The Harrison Hot Springs Hotel is a decided attraction for all visitors to the valley.

In concluding the record of this most considerable rural area in British Columbia, it may be pointed out that there have been three major periods or cycles of growth. The first was in the decade following the construction of the Canadian Pacific Railway. Then came the period of prosperity and the boom-time which culminated shortly before the war, and which witnessed the building of two railways and the general extension of the modern conveniences of electricity and the telephone. The post-war period has seen the improvement of highways and development of automotive transportation, along with a fresh influx of population.

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4. Daily Columbian, New Westminster, Sept. 18, 1890.

What does the future hold for the Fraser Valley? It would scarcely be a bold prediction to say that the future development will be even greater than that of the past. The pioneers have built well, and one can readily visualize the whole area from Hope to the sea filled with a contented and prosperous people.

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