BURTON WILBUR ADKINSON

THE HISTORICAL GEOGRAPHY OF THE SNOHOMISH RIVER VALLEY

A SECTION OF THE SNOHOMISH RIVER VALLEY

The town of Snohomish can be seen in the background.
Notice the lack of buildings on the valley floor.

PLATE I

THE HISTORICAL GEOGRAPHY OF THE SNOHOMISH RIVER VALLEY

by

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THE HISTORICAL GEOGRAPHY OF THE SNOHOMISH RIVER VALLEY

INTRODUCTION

Since 1858 the Snohomish River Valley has gone through a series of distinctive economic-geographic adjustments. These adjustments evolved gradually from the first stage of simple exploitation of the timber resources to a combination of lumbering and farming. As settlement progressed, transportation facilities improved, and better markets became available, agriculture gradually became more specialized.

The history of settlement and the population pattern were influenced by geographic factors within the valley, such as topography, drainage, soil, and length of frost-free season, as well as by certain external events. Repercussions of economic developments in other areas were felt in this region through the influx of people who had previously been attracted to the gold fields of California and British Columbia. Lumbermen from New England and the Great Lakes Region introduced new methods and ideas. After agriculture in parts of New England and the Middle Atlantic States became less profitable because of competition with cheap wheat and meat from the Middle West, many farmers from the eastern seaboard migrated to the Snohomish Valley to begin a new life. All of these various groups made their influence felt and contributed to the development of the valley.

It is the purpose of this paper to emphasize geographic causation by analyzing the environmental setting in its influence upon the changing adjustments in the valley. Such an analysis is basic to an understanding of present and future trends.

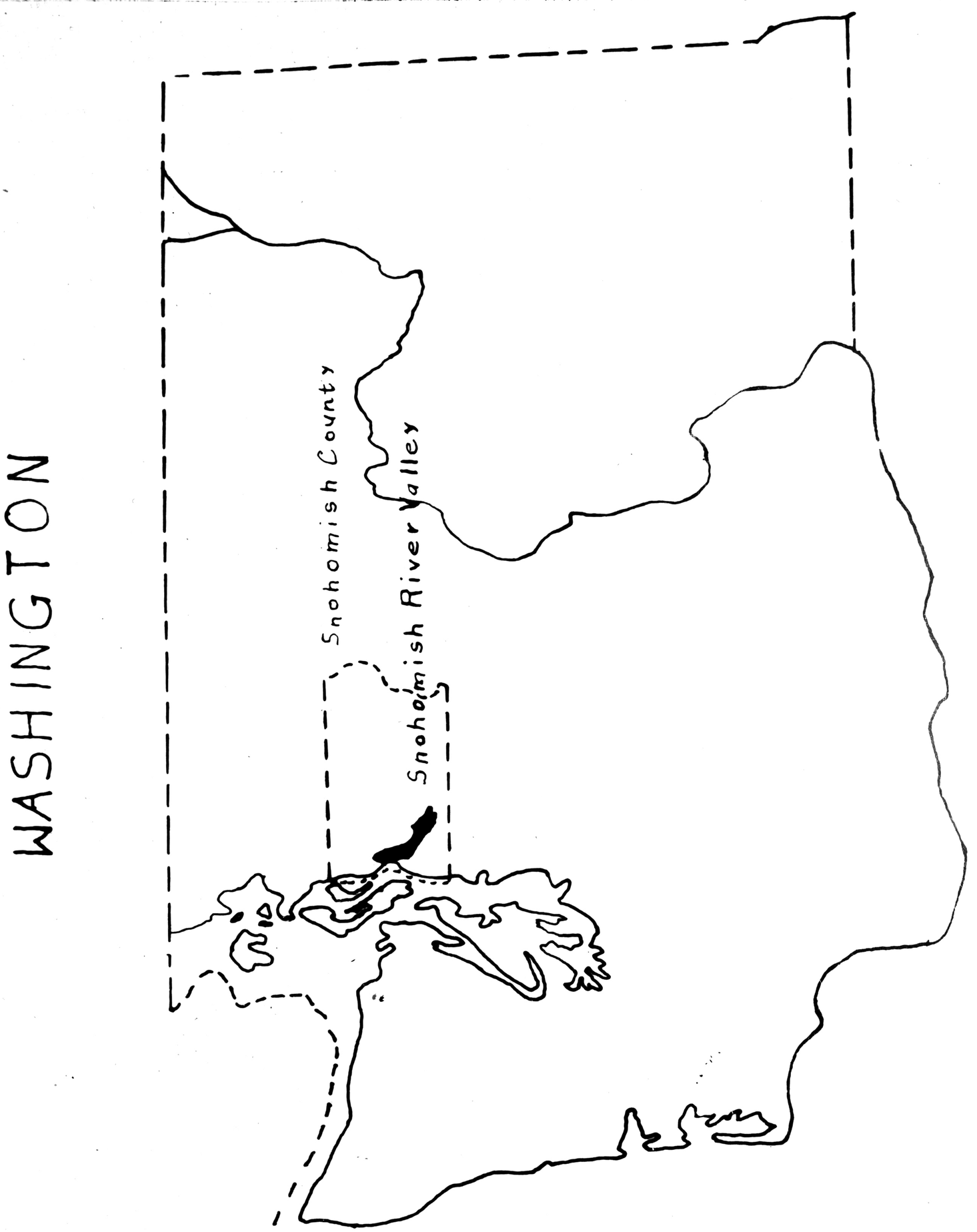
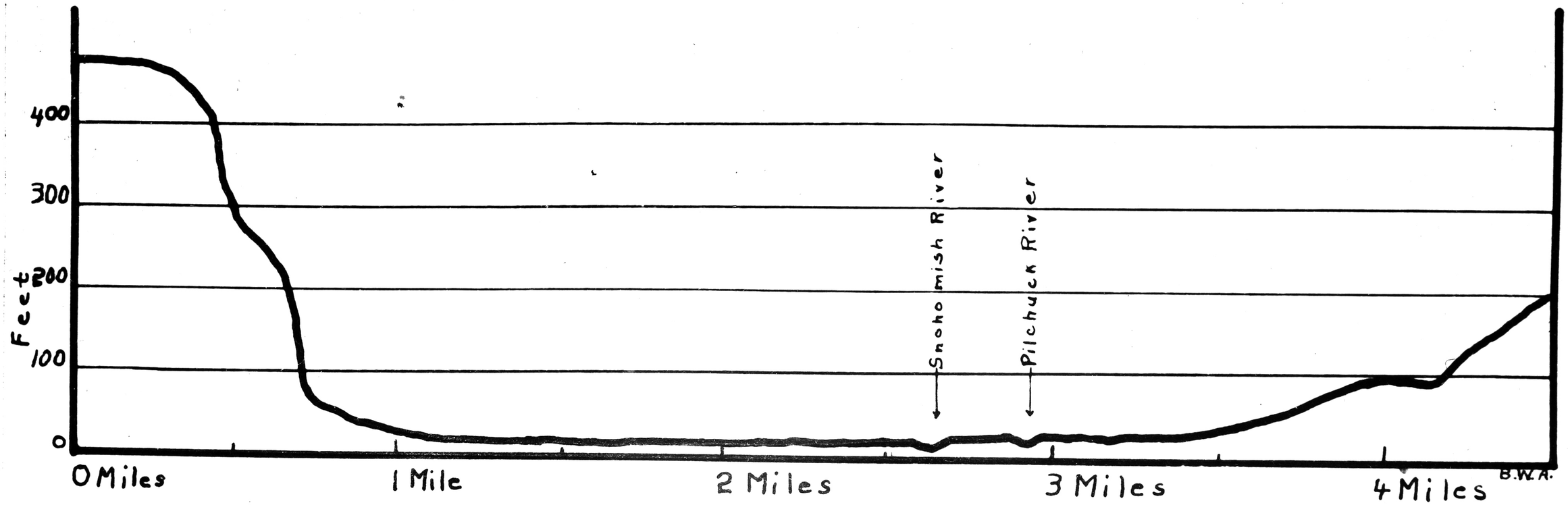


PLATE II

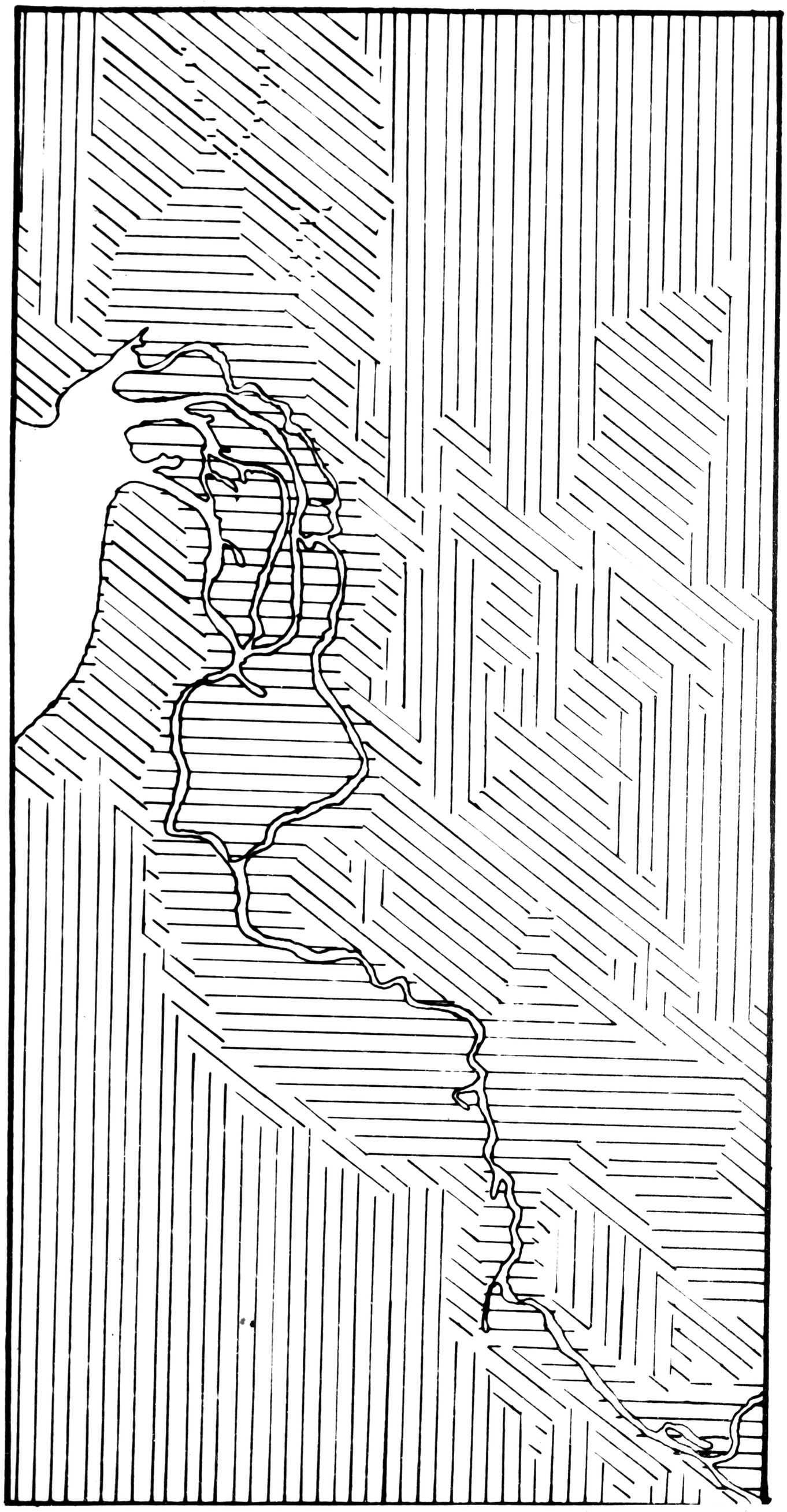
PLATE III

PROFILE OF THE SNOHOMISH VALLEY



Taken from U.S. G.S. Snohomish Quadrant T. 28 - R. 5E & R 6E

SURFACE FEATURES



Scale 1 inch = 2 miles

Lowland - 0 to 50 Feet in elevation

Upland - 51 to 250 Feet in elevation

Upland - 251 Feet up in elevation

Water

Adapted from U.S.G.S Mount Vernon and Snohomish Topographic Sheets

PLATE IV

CHAPTER I

THE ENVIRONMENT--PHYSICAL AND CLIMATIC

Location and Formation - The Snohomish River, which is formed by the Snoqualmie and Skykomish Rivers, flows from a point near the southern boundary of Snohomish County in a northwesterly direction to Port Gardner Bay. The Snohomish River Valley differs from most of the river valleys in the Puget Sound area in that it does not head in the Cascade Mountains, but lies entirely within the Puget Sound Lowland.[1] The two streams, the Skykomish and Snoqualmie, which have formed the tributary valleys, head far back in the Cascade Mountains.

The slopes on either side of the valley are precipitous, being formed by low but steep-sided hills.[2] On the south the hills separate the Snohomish Valley from the Sammamish River Valley and the Lake Washington Depression.

The region for discussion in this paper is limited to the floor of the Snohomish River Valley because of the sharp distinction in soil, vegetation, and topography between the valley floor and the valley sides.[3] However, some industries which extend into adjoining regions are necessarily included in order to complete the analysis.

Topography - Nowhere in its entire length of twenty-five miles does the valley floor exceed an elevation of fifty feet above sea level. Within five miles of

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1. See Plate II, Outline Map of County and State, page 3.
2. See Plate III, Profile Map, page 4.
3. See Plate IV, Surface Features Map, page 5.

A FLOOD IN THE SNOHOMISH VALLEY, SPRING, 1938

PLATE V

The water rose so rapidly that these posts along the Stevens Pass Highway in the foreground were covered completely four hours later.

A RECEDING FLOOD IN THE SNOHOMISH VALLEY, SPRING, 1938

This picture was taken two weeks after the preceding one. Notice the highway in the background. The river bed is about a mile from this location.

the river mouth much of the valley is swampy. The river itself follows a meandering course for twenty-two miles along the valley floor, and some seven or eight miles from the bay divides into several channels forming a deltaic mouth.[1] The four largest channels named in order from east to west are Ebey Slough, Steamboat Slough, Union Slough and The Old River.

Because of the small gradient, tides affect the entire length of the river. Distinct tides are noticed eighteen miles upstream. When there is a spring tide or a steady wind blowing from the west or northwest, the water is backed up so that a tide can be measured as far inland as the confluence of the Skykomish and Snoqualmie Rivers.

Due to its low elevation most of the valley floor is subject to floods during freshet periods.[2] These floods usually come in the fall, the months of November and December having the largest number.[3] After the first snows have fallen on the mountains in the autumn or early winter, a period of warmer weather is sometimes experienced. Because the ground has been completely saturated with the fall rains, melting snow causes the amount of water entering the streams to increase rapidly to flood stage.

The second largest number of floods occurs in March or April. When a strong southwest wind accompanies heavy rainfall, the snow in the hills melts quite rapidly. Since the tributary streams have steep gradients, any increase in run-off in their watersheds will cause the Snohomish River to start flood-

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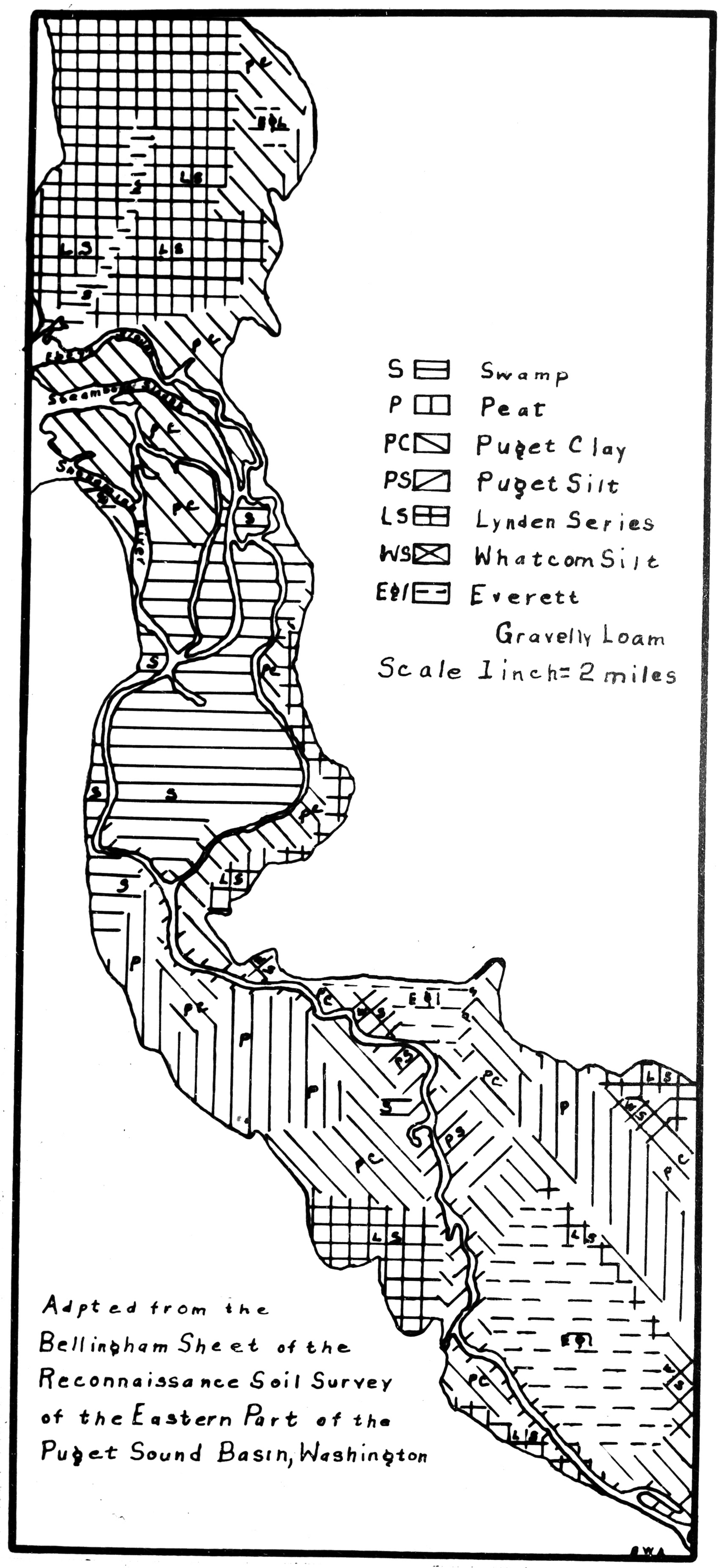
1. See Plate IV, Surface Features Map, page 5.
2. See Plates V and VI, Photographs of Flood, Pages 7, 8.
3. Document 258, House of Representatives, 73rd Congress, 2nd Session.

TYPES OF SOIL
IN THE
SNOHOMISH RIVER VALLEY



Adpted from the Bellingham Sheet of the Reconnaissance Soil Survey of the Eastern Part of the Puget Sound Basin, Washington

PLATE VII

ing in two to four hours. Although floods occur most frequently in fall and spring, no month is entirely free from this danger.

Soils - All soils in the valley are poorly drained. The soil types include Puget silty clay, Puget silt loam, Lynden sand loam, Lynden fine sandy loam, Whatcom silt, and peat and muck.[1] On both sides of the river above the delta there is a narrow strip of Puget silt loam. The soil in the deltaic mouth is Puget silty clay and swamp. One large area of peat and muck extends from the head of the delta to a line within a half mile of the town of Snohomish. Another area of peat and muck, located in an arm of the valley north of Lord's Hill, extends to within a half mile of the Pilchuck River. Between these two areas of peat and muck is a strip of Puget silty clay. Scattered throughout the valley are patches of Puget silty clay, Whatcom silt and Lynden sand or fine sandy loam. The soil type in Lord's Hill is Everett gravelly loam.

There are two narrow extensions of the valley pointing toward the north. The first, a low divide connecting the Snohomish and Stillaguamish Valleys, has Lynden sandy loam except along Quilceda Creek. The second is the arm formed by the Pilchuck River Valley which has Puget silty clay or Puget silt loam.

The soils in the low hills on either side of the valley are mainly Everett gravelly sandy loam and Lynden fine sandy loam. Due to the porous nature of the top soils and subsoils these hills drain very rapidly. On the southern and western sides of the valley the slopes are very precipitous while along the northern and eastern sides they are more gentle.

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1. See Plate VII, Map of Soils, Page 10.

Division in Upper Valley - The upper Snohomish Valley is divided into two arms by Lord's Hill. The arm to the north of the hill is really an extension of the Skykomish Valley, but may be considered part of the Snohomish Valley from Park Place west; south of the hill the Skykomish and Snoqualmie Valleys join to form the Snohomish Valley.[1]

Climate - The climate of the Snohomish Valley may be classified as a modified marine type; it is not a true marine climate due to the influence of the Olympic Mountains to the west and southwest. The precipitation in the valley follows a typical regime with a winter maximum and rain in every month of the year. Because of the diminishing influence of the rainshadow of the Olympic Mountains, the annual amount of precipitation increases rapidly from west to east. The mean annual precipitation for Everett, which is located at the mouth of the river, is 32.8 inches.[2] At Snohomish, just four miles east and four miles south of Everett, the mean annual precipitation is 43.5 inches.[3] Monroe, just beyond the upper end of the valley, receives 46.49 inches.[4] The difference in elevation between Everett and Monroe is so slight that it has no influence on the amount of precipitation.[5]

The whole valley receives maximum precipitation in winter. At Snohomish a little less than five inches of rain falls during the three

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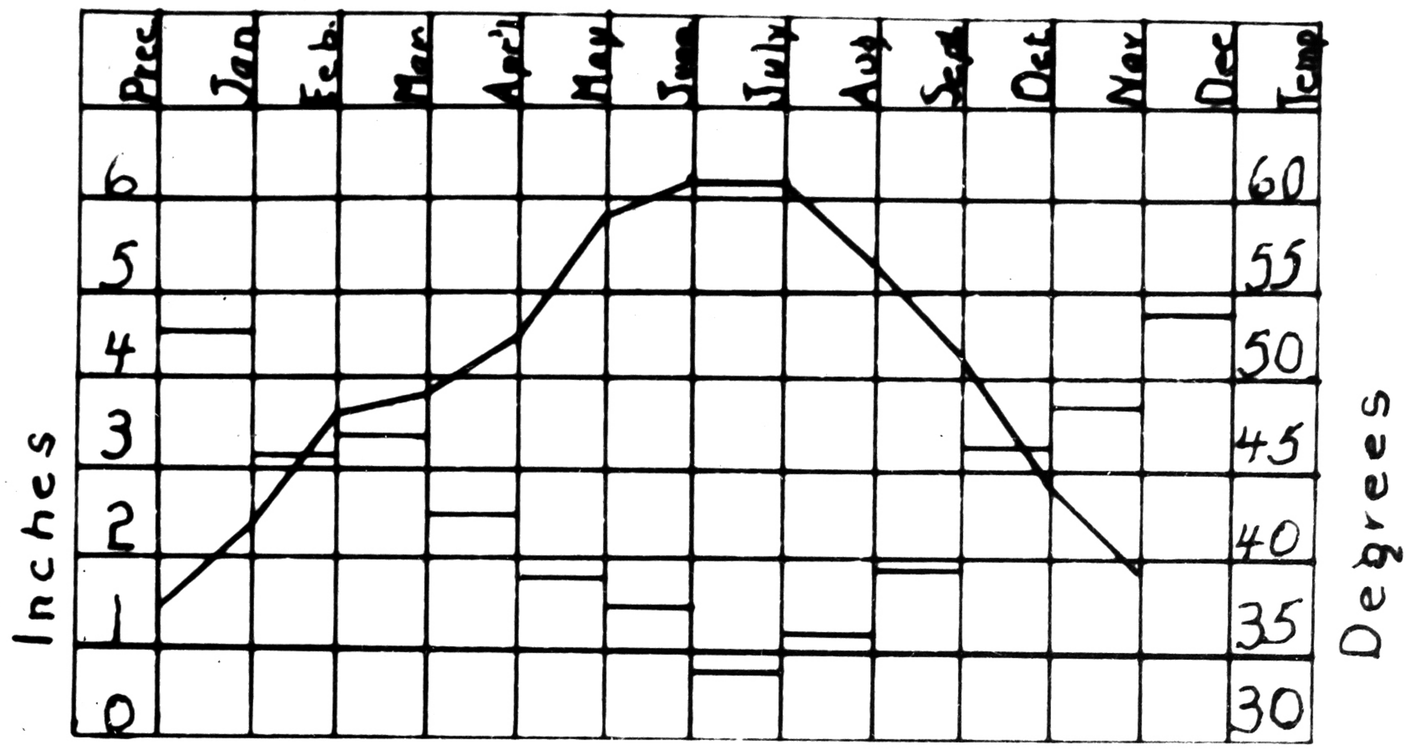
1. See Plate IV, Surface Features Map, Page 5.
2. U. S. Weather Bureau records from 1915 to 1938.
3. U. S. Weather Bureau records from 1895 to 1918.
4. U. S. Weather Bureau records from 1930 to 1938.
5. Everett lies between o' and 200' elevation while Monroe lies between 50' and 100'.

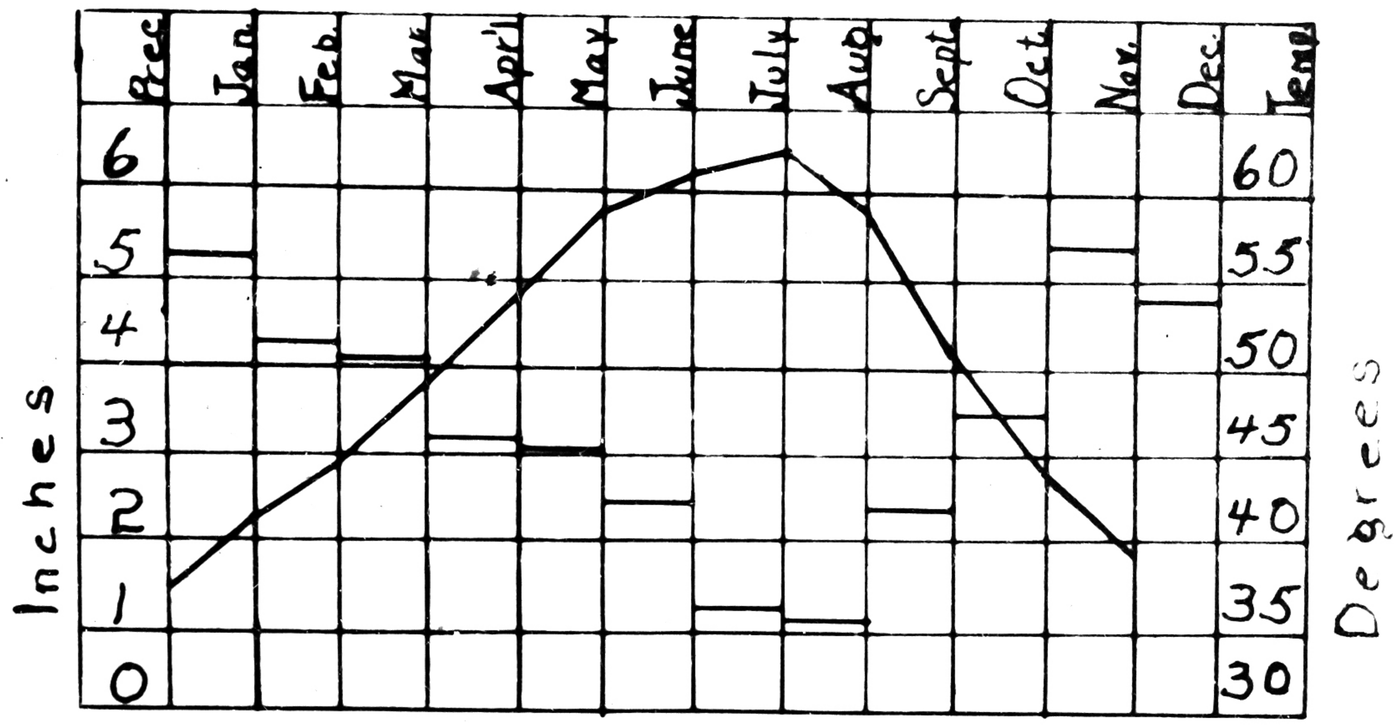
Everett, Washington



Average monthly precipitation
and temperature
Record for 16 years

Data from U. S. Weather Bureau
Seattle, Washington

Snohomish, Washington



Average monthy precipitation
and temperature
Record for 26 years

PLATE VIII

summer months (June, July, August), while the three winter months (November, December, January) receives more than fifteen inches.

Very little of the precipitation comes in the form of snow. The average annual fall of unmelted snow[1] for the whole valley is ten inches. Snow usually comes in small flurries and seldom stays on the ground more than a week at any one time.

Temperatures - The modifying influence of Puget Sound to the west is shown by the temperatures in the valley. At Everett, located directly on the Sound, the average annual range is 23.8 degrees, with an August average of 61 degrees and a January average of 37.2 degrees. Snohomish, situated eight miles inland, has an average annual range of 24.5 degrees with an August average of 62.5 degrees and a January average of 37.8 degrees. Further influence of the Sound is shown in the number of frost-free days for these two stations. Everett averages 193 frost-free days while Snohomish has only 179,[2] yet Everett has lower average temperatures both in January and in August. Many of the frosts are not killing, and grass often remains green throughout the year.

Vegetation - The original vegetation in this region was typical of the Puget Sound Lowland.[3] In all places, except where water stood most of the year, a

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1. A twenty-three year average for Snohomish.

2. Records from Climatic Summary of Western Washington, U. S. Weather Bureau, Seattle, Washington, Published 1930.

3. Reconnaissance Soil Survey of Eastern part of the Puget Sound Basin, A. W. Mangum and party, U. S. Dept. of Agriculture, Bureau of Soils, 1911, pp. 26-42.

heavy mantle of forest existed. Shrubs, vines and mosses grew under these trees.

The predominant type of tree in any part of the valley depended largely upon soil and drainage. In the lowland, where the drainage was poor, cedar, maple, alder, vine maple, cotton wood and willow were leading species. Along the streams leading back into the hills cedars grew profusely. Mixed in among the cedar were some Douglas fir, spruce and hemlock. Wherever there was sufficient elevation to allow good drainage the Douglas fir became the predominant species. The hemlock was mixed in with the fir on soil not too well drained.

In lowland areas where water stood for any length of time, marsh grasses grew. No large timber was found in most of the valley because it was often flooded. The forest was located along the edges of the valley close to the hills where the land was high enough to drain quickly after being flooded.

CHAPTER II

THE EARLY CULTURE PATTERN

Early Explorers - The Snohomish Valley was known to white men long before it had any white settlers. In 1792 and 1793 when Captain George Vancouver was exploring and mapping the Puget Sound area, Joseph Whidbey, one of his lieutenents, on his travels around Whidbey Island noticed the mouth of the Snohomish River. Samuel Hancock, an agent for the Hudson's Bay Fur Company, mentions traveling up this river in 1848. The early mill owners on the Sound knew about the fine stands of timber and the ease of navigation.

During the early history of the Northwest, many mill companies located along Puget Sound and set out small crews of men to cut the more available timber along the streams flowing into the Sound. Several of these crews came to the Snohomish Valley. These "placer loggers"[1] removed the best timber close to the water's edge. There were, however, no permanent settlers recorded at this period.

Settlement Due to Influence of Indian Wars - During the Indian Wars in the Northwest, 1854 to 1858, the settlers along Puget Sound feared attacks by Indians from east of the Cascade Mountains who had sent agents over to stir up and organize the western Indians. Since one of the best routes over the Cascades was through the Snoqualmie Pass and down the Snoqualmie and Snohomish Rivers, the settlers decided to build a string of forts along these streams. Volunteer troops organized under Colonel Isaac Ebey built and

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1. Whitfield, Wm., Editor, History of Snohomish County, Northwest Historical Society, 1926, p. 686.

garrisoned these defenses.

Although a number of block houses were built along the two rivers, the main fort with the garrison was located on Ebey's Island on the lower Snohomish River. The garrison was held at the fort during the winter of 1855. Colonel Ebey then returned to his place on Whidbey Island, and the members of his volunteer force were sent to Bellingham or Steilicoom, where regular United States forts were located. In 1858 when the volunteers were released from duty, several returned to locate in the Snohomish Valley. Records indicate that the following nine men settled here: Dr. H. A. Smith, Charles Seibert, James Long, Robert Smallman, Francis Dolan, James Riley, H. McClurg, S. D. Howe, and Patrick Doyle.[1] These men did not settle in any one location but spread out on both sides of the river from its mouth to the Snoqualmie.

During the Indian Wars a military road was planned, which was to run from Fort Steilicoom to Fort Bellingham along the east side of Puget Sound. This road would enable the settlements to keep closer contact with one another. Also the garrisons at the two forts could better protect the small settlements scattered along the many streams flowing into the Sound.

In 1859 several Seattle men decided to obtain possession of the best ferry site where the proposed military road crossed the Snohomish River and build a trading post. Representatives were sent in the fall of 1859 to homestead the land on both sides of the river at the point where the road would cross. When the military road did not materialize, the promoters lost interest, but three of the homesteaders remained in the valley. E. C. Ferguson, Neil Barnes, and E. T. Cady all had homesteads on or near the

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1. Ibid., p. 628.

present site of the town of Snohomish. Later Barnes' homestead was taken by John Harvey, and Sinclair came to take E. T. Cady's place. Cady had become interested in hauling supplies to the small logging camps located along the Snohomish River and its tributaries.

A crew of men eventually came to the Snohomish Valley to work on the military road. In 1862, after a very poor trail was blazed and the work stopped, the following members of the road crew settled in this region: Alexander Davis, Charles Short, Charles Taylor, John Ross, John Richards, Jacob Foss, and George Kelsey.[1]

Settlers from Fraser River Gold Fields - A number of men who had worked in the Fraser River gold rush drifted into the Snohomish Valley. E. C. Ferguson, after he had returned from British Columbia, located a claim on the Snohomish River and hired Martin Getchell, another ex-gold-seaker, to work for him.

Timber Attracts Settlers - The largest number of early settlers were probably attracted to the valley because of the logging possibilities. The Snohomish River and its tributaries offered an excellent waterway in which to float the logs which could be cut from the timber covering most of the valley floor and all the nearby hills. A number of crews had come to this area to cut timber but none of them had remained permanently. Following 1863, a number of small camps were started and these increased both in number and in size during the next two decades.

Outside Influences - Various outside influences combined to attract new settlers to the region. Several sailors who had deserted British Naval ships along the Pacific Coast came to the valley. After agriculture in parts of

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1. Morse, Eldridge, Centennial History of Snohomish County, Northern Star, July 8, 1876.

New York and New England became less profitable due to the influx of cheap meat and wheat from the Mid-west, many farmers from these areas moved west--particularly between 1860 and 1890. A number of loggers from New England, who were in search of better timber, located in this new region during the same period. Some people drawn to the gold fields of California and British Columbia later settled along the Snohomish River. A number of Scandinavians, chiefly Swedish, located around Marysville between 1880 and 1910. Just after the turn of the twentieth century, several lumbermen from the Great Lakes region began business here.

Analysis of a list of valley residents available in "The Illustrated History of Skagit and Snohomish Counties" shows that the larger percentage of the new comers were of the so-called old American stock--English, Irish and Scotch. The second largest element in the growing community was made up of Scandinavians from the lake states or directly from Norway and Sweden. The following briefer list is representative of settlers who came during the period 1860 to 1901.

DATE	NAME	NATIVE STATE	OCCUPATION THERE	OCCUPATION HERE
1860	E. C. Ferguson	New York	farmer, later carpenter	merchant
1860	G. Walker	Maine	paper mill worker	farmer
1860	M. Getchell	Maine	logger	logger
1863	E. D. Smith	Maine	sailor	logger
1863	H. Spurrell	England	sailor in Navy	lumber man
1863	T. Elwell	Maine	logger	logger
1865	C. Ferguson	New York	farmer	farmer
1872	A. A. Blackman	Maine	logger	logger
1872	Larimer	Indiana	farmer	farmer
1874	Abel Johnson	Minnesota	logger	farmer
1879	D. Sexton	Ohio	farmer	farmer
1883	J. F. Stretch	New York	farmer	farmer
1884	M. Lord	New York	farmer	farmer
1886	M. Morgan	Wales	farmer	farmer
1888	E. Lenfest	Maine	surveyor	surveyor
1899	C. S. LaForge	Maine	logger	lumber man
1900	E. A. Nickerson	Minnesota	logger	lumber mill
1901	F. Baker	Michigan	logger	lumber mill

CHAPTER III

EARLY TIMBER EXPLOITATION PERIOD

Early Settlers - A census made by E. C. Ferguson in 1861 listed twenty-nine men living near his homestead on the site of the present town of Snohomish.[1] Twenty-four of the twenty-nine had come from New York and adjacent states and the others were from countries in Northern Europe. Most of these men were engaged directly or indirectly in logging activities. Yet not one man listed himself as a logger; nineteen classed themselves as farmers, one as a blacksmith, one as a machinist, one as a cabinet maker, one as a sailor and three as carpenters. Ferguson listed himself as a carpenter. These early settlers who had been attracted to the region because of the opportunities offered in logging seemed to regard this as only a temporary form of employment until they could clear their land or establish themselves in their chosen occupations. As the number of settlers in the valley increased, they told other people about the excellent timber, rich soil and ease of river travel.

Early Placer Logging - Since nearly all the early settlers were loggers, they located their camps as close to the river as possible. For the first thirty years of settlement the Snohomish River provided the easiest means of transportation. The early loggers needed to be close to the streams in order to handle timber. The trees were felled, chopped or sawed into lengths, rolled into the water, and gathered into a boom. This boom consisted of a number

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1. Whitfield, Wm., Op. Cit., pp. 72, 73.

of long slender poles chained together to form a large enclosure. After the boom was filled the logs were "driven" down to the river's mouth. Here they were collected and made into rafts, which could be towed by tug boats to mills on the Sound.

The early camps contained from three to twelve men who did all the work by hand. They lived in bunk houses built from shakes and bark; the wooden bunks were filled with straw or boughs in lieu of mattresses. All cooking and cleaning was done by the men themselves. After a short time all the accessible timber was cut and the camp moved to another location. Thus the term "nomadic hand-loggers"[1] accurately describes these men.

During the first few years of placer logging, since there had been no land survey, operators cut the most accessible and most valuable timber without regard for ownership. It was not until 1871, eight years after the beginning of logging, that any patents for homesteads were received by settlers. Only fifty-nine patents were granted in Snohomish County before 1878.

Skid Road Logging - In 1863 Eugene D. Smith and his partner, Otis Wilson, began operations in the vicinity of the present site of Lowell. These two experienced Maine woodsmen introduced skid-road logging. This method soon replaced "placer logging" as the fir timber was located along the edges of the valley some distance from the river.

The skid roads consisted of trails with timbers, six to eighteen inches in diameter, laid across them and half buried in the ground. The distance between the timbers--known as skids--ranged from one or two feet to eight

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1. Illustrated History of Skagit and Snohomish Counties, Interstate Publishing Company, 1906, p. 258.

feet, depending upon the length of logs hauled or the type of terrain. Alder and maple were preferred as skids, but fir was often used. Sometimes a notch was made in a fir skid and a piece of maple inserted. When the skids were dry, they were oiled to make the logs glide easily.

Timber was felled close to these trails, cut into lengths and peeled on one side so the log would slide smoothly. To keep the log from rooting up the skids, one end was sniped, that is, rounded like a sled runner. Several logs were chained together and four to eight oxen pulled them to the landing. Skid roads were commonly used in the Puget Sound region until the twentieth century; even then they were often used as feeders to tram lines or railroads. All timber within easy walking distance of a stream could be skid-logged. Therefore, skid road camps were larger than the old placer camps.

The following firms began operations on the Snohomish in 1863 and 1864: Long and Spithill on Ebey Slough, Port Ludlow Mill Company above the side of Snohomish, Preston Brothers a mile below this site, and Phinney and Hawks just off the river on the Pilchuck. In 1865, nine additional camps were located in this region. One member of this group was Tamlin Elwell, a Maine logger, who had visited the valley in 1858.

As numerous camps were started, the amount of timber driven down the river increased. In 1866 over ten million board feet was floated to the mouth and made into rafts. By 1870 this amount had increased to over forty million feet. As there were no saw mills in the valley, all the timber had to be towed to Puget Sound mills.

Early Farmer-Loggers - Many of the Snohomish settlers who were connected directly or indirectly with logging activities, considered themselves farmers. All the land in the valley available for farming was covered with

either forest or swamp. This made it necessary for prospective farmers to either drain and dike the land or clear it of forest. The earliest settlers knew nothing about draining swampland so preferred to clear timber, which also had a sale value. As soon as a small patch was ready for cultivation, the occupant would start part-time farming along with his logging activities.

Clearing land was an arduous and expensive task. The early settlers were not able to wait until the farm would bring returns enough to support them. They used various means of obtaining ready money. Many removed the timber from their own land and sold it to the mills. E. C. Ferguson, a typical example of these early pioneers, settled his homestead in 1860 and immediately began to log it. By 1864 he had enough money to build a store. Eugene D. Smith, who was primarily interested in logging, had enough land cleared by 1877 to raise one hundred fifty tons of hay for his oxen. These early settlers were neither farmers nor loggers but a combination of both.

Many of the early logger-farmers obtained cash by splitting shakes or shingles from the many fine cedar trees found growing on the lowland. As there were no machine-made shingles until 1885, a ready market could be found for all the shingles and shakes a farmer cared to make.

Many farmers had an added source of income by cutting ship knees from stumps. A stump with a root that had the proper curve was selected. Then the ship knee was hewn from the stump and root. This not only helped remove the stump but also gave the settler a chance to make money. The average price for ship knees during this early period ran from forty to fifty cents a foot, depending on size. In 1883 on the Hawkin's Place, about three miles east of Snohomish, 250 ship knees were piled up ready for sale.[1] The

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1. Whitfield, Wm., Op. Cit., p. 647.

local newspaper estimated that this pile was worth eight hundred dollars.

Even as late as 1885 many farmers supplemented their agricultural income with some form of logging. The first lumbermen were interested mainly in saw timber and the Western Red Cedar did not command a very good price. Cedar not used for hand-made shakes and shingles was, therefore, usually left lying on the ground or burned. After the introduction of the power shingle machine in 1885, many farmers cut shingle bolts from cedar left on their farms. This added considerably to their income and at the same time helped them get rid of unwanted material.

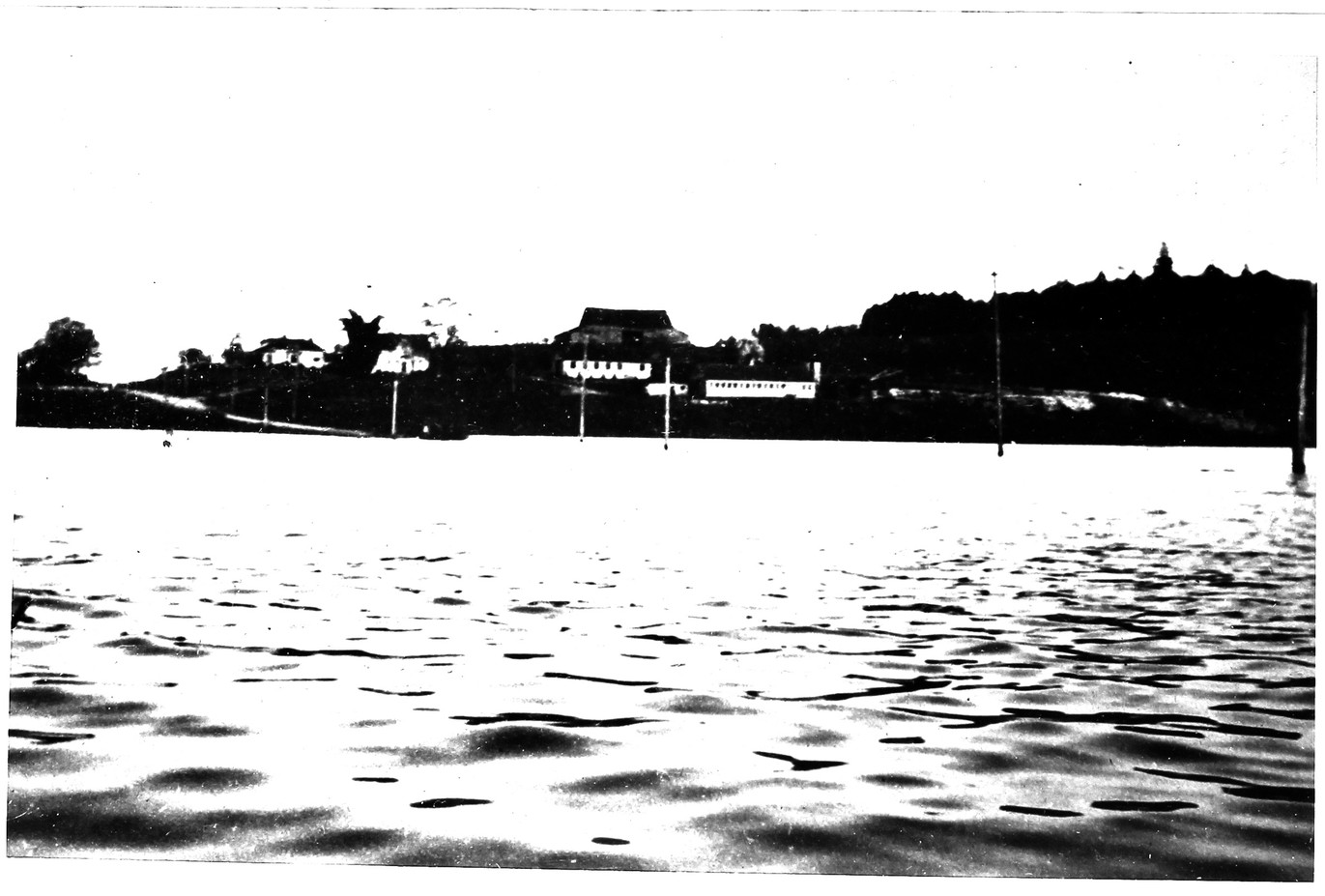
Many settlers worked part of the year in logging camps belonging to other men. Most of the camps did not run the entire year, closing in the worst part of the winter season, during a very dry season, and at times when the price of logs was too low. During these slack periods an opportunity was offered to clear farm land and make general improvements.

When a sufficiently large area had been logged and cleared, the settler devoted all his time to farming. These early farms were vital parts of the Snohomish Valley's economy as they grew vegetables, fruits, and some grains for local sale and forage for the horses and oxen.

Factors Affecting the Location of Farms - Because the farmer had to sell his surplus produce and procure supplies from the outside, he located as close to the river as possible, since it was his only means of transportation.

Another large factor in determining the location of the early farms was the difference in vegetation on the valley floor and on the slopes. As previously mentioned, much of the valley was covered with cedar and various small hardwoods, none of which had a deep root system. After an area had been cut and burned, the work of getting the stumps off the land was not nearly so great as in an area where the trees were deeply rooted. If trees were slashed

A FLOODED SECTION OF THE SNOHOMISH VALLEY, SPRING, 1938



All the buildings are located on the slope well above the flood level.

A HOME ON THE VALLEY FLOOR

Notice the walk built between the house and the barn for use during high water. The lower floor of the house is vacated during high water while the lower part of the barn is used only for temporary storage space.

PLATE X

and burned then left for two or three years most of the stumps could be pulled easily because the roots of the small hardwoods rotted quickly after the trees were killed. The cedar with its shallow root system did not rot quickly but was not difficult to burn, dig or pull. A farmer could leave the few fir and hemlock stumps in a field and cultivate around them. The upland settler had mainly deep-rooted fir and hemlock stumps difficult to remove.

Agricultural settlement in the valley proper was also aided by another factor. Valley soils dry slowly because of impeded drainage. During the dry periods in July and August the soil in the valley would retain enough moisture to keep the crops in good condition, while the better drained uplands would lose moisture rapidly and crops often suffered from drought.

Even with the better soil and greater ease of clearing, the process of preparing valley land for cultivation went on slowly. In 1883, over twenty years after settlement was well started, the average clearing on the older farms did not contain more than thirty acres. Many farms had from one to five acres and on nearly every farm more than twice as much land was slashed and burned for use as pasture as was cleared and cultivated.

Although settlers tried to get most of their claims on the valley floor, they planned to have a little upland or slope on their farm.[1] Hardly a year passed but most of the valley was under water for a week or more. Buildings were preferably located on the edge of the uplands above the high water mark.[2] If a farm had no upland, its buildings were placed in the best spot possible, and frequently put on piling to raise them above flood level. The added expense of this procedure is obvious.[3]

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1. See Frontispiece.
2. See Plate IX, A Flood.
3. See Plate X, Photograph of a Building.

CHAPTER IV

TIMBER--BASIS FOR THE WOOD INDUSTRIES

The Valley's Interest in Logging - After most of the merccantable timber had been removed from the valley floor and nearby slopes by 1885, several factors operated to keep the logging industry centered in this region. First, all the logs were floated down the Snohomish River. Second, many companies had located their headquarters and bunk houses in this region. Furthermore, most loggers with families lived in a town or on a homestead.

Introduction of Tram Logging - As timber operations moved farther back into the hills and skid road logging became less profitable because hauls were longer, and steeper slopes were encountered, an important change in methods was introduced by the Blackman Brothers. These three men, experienced loggers from the Maine lumber camps, reached Puget Sound in 1872. By 1876 they had started their own local operations. In 1881, when logging the hills back of the present site of Snohomish, they built the first tramway for logging cars ever used in the Pacific Northwest.[1] This original tramway was constructed of timber rails on which cars with wheels flanged on both sides were drawn by eight oxen and horses. Later a steam locomotive was built and larger loads were hamled. The new tram road was so successful that it was generally adopted by loggers in the Puget Sound Region; the skid road was still used to bring the logs to the tramway.

The Use of the Log Chute - Chutes were occasionally used in early logging; E. D. Smith used one near Lowell in 1870. It was not, however, until operations

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1. Whitfield, Wm., Op. Cit., pp. 681-684.

reached steeper terrain during the tram road period that chutes were generally adopted. Later, when the shingle business became important, the chute was also used to transport bolts from the hills to the lowlands.

The chute itself consisted of a trough built of logs. Logs or bolts were rolled into it and slid down the hillside to the valley. The chute usually ended at a stream whence timber could be floated to a mill or loaded on a tram and hauled to its destination.

The Donkey Engine - About ten years after the Blackman Brothers invented the logging truck, the steam donkey engine was introduced in the Northwest. This engine, mounted on sled runners, turned large drums on which wire cables were wound. The cables were "run out" into the woods and fastened to logs which were then yarded to a tram or railway, where a donkey engine was commonly used to load the logs on the cars. With improved methods, logs could be hauled from a distance exceeding a thousand feet.

The donkey engine could pull logs more rapidly than they could be hauled by horse or oxen. Also, this engine could "snake" logs across practically any type of terrain, which saved much expensive road or chute building.

New Methods of Bucking and Falling - The improvement in moving timber was paralleled by new methods of bucking and falling. During the placer logging period the ax was used to fell trees and cut them in lengths. Later bucking was done with a crosscut saw and by 1890, it was employed to fell timber.

The Effect of Machinery on Logging - The introduction of logging machinery required considerable capital. This tended to reduce the number of camps. A logging company using heavy machinery and expensive roadway tried to avoid frequent moves by acquiring large blocks of timber and operating from one base for a number of years. The number of men per camp increased with the introduction of machinery. The early Snohomish camps often had only three

to twelve men, and fifteen or twenty men were a large crew. Companies using machinery employed twenty to more than two hundred men. In their camp near Marysville, Blackman Brothers frequently had one hundred fifty men on the payroll.

Introduction of these new methods enabled loggers to increase their total output. From fifty to seventy million board feet of timber was being transported annually through the Snohomish Valley. Some of the logging companies began to build mills in this region to manufacture logs into lumber.

The First Saw Mill - The construction of a saw mill on the Pilchuck in 1876 by Witter and Bennett inaugurated the lumber business in the Snohomish Valley. This mill, using water power, had a capacity of ten thousand board feet daily. Because of its convenient location--only a mile north of town--this sawmill furnished much of the lumber used in constructing the first buildings in Snohomish. This plant was operated for a short period by E. C. Ferguson and his father-in-law, who soon sold it to the Morgan Brothers. The new owners remodeled the mill, increasing its capacity and adding a sash and door department.

The Development of the Shingle Business - Five years after the construction of the Bennett-Witter mill, the second saw mill in the valley was built by Blackman Brothers. This mill was twice destroyed by fire and when it was reconstructed in 1885, a shingle mill with power machines was added. Until this time no shingles had been made on power machines in the Northwest.

Because shingle machines were inexpensive and required little power, a shingle mill could be built with greater ease than a saw mill. Also, the lumber mill required a larger log than the shingle mill which used bolts about four feet in length. These were cut into blocks eighteen to twenty-four inches in length for use in the up-right shingle machine.

Years of trial and error experiments with various potential shingle woods had resulted in the almost universal adoption of the Western Red Cedar. This shingle was well advertised in eastern United States and was readily accepted as superior roofing material. It outlasted most other types of roofing, was easy to lay, and did not catch fire readily since it was not easily ignited by sparks. The increasing demand for cedar shingles in the East caused many new mills to be opened in the Far West. By 1894 there were six shingle mills in or near the town of Snohomish; eight more in or near Marysville; several in Everett, and others located along small streams. By 1899 there were sixty-four shingle mills in Snohomish County, about half of them in the Snohomish Valley.

Many small shingle mills were built at the edge of the valley on streams heading in the uplands so that timber could be floated or slid down in chutes. As soon as the timber along one stream was exhausted, the mill was dismantled and moved to a new site near another supply of cedar. Shingle mills were often built in connection with saw mills, since much cedar was brought in with fir. The better cedar was used for lumber and the rest manufactured into shingles.

Until railroads entered the valley, operators shipped their shingles by boat to Seattle or Tacoma then transferred them to rail. However, the excessive freight rates on shingles almost killed the business. The Blackman Brothers again came to the rescue with a new device. Shingles had been shipped "green", i. e., with considerable moisture content. Thus, all shingle shippers had been paying freight on unnecessary moisture. In 1886, Blackman Brothers built a steam dry kiln at their plant in Snohomish. The reduction in freight rates per thousand kiln-dried shingles was sufficient to put the business back on paying basis. As kilns were easy to build and saw dust from the

shingle machines furnished cheap fuel, most of the mill operators adopted kiln-drying.

The shingle business continued to prosper in the valley until 1915. As the more accessible timber became exhausted, the smaller mills were closed. The only plants operating by 1925 were those able to get logs by water from other areas.

The shingle mills in the valley today, might be called "scavenger mills", because they use timber rejected by earlier plants and the present saw mills. The farmers clearing land sell a few bolts from left over cedar stumps or logs. Small gleaning crews going over logged-off areas find some cedar timber. This supply, plus logs purchased from incoming booms, keep three mills in or near Marysville, one in Snohomish and two in Everett running. Most of the saw mills in Everett have a shingle department, and the cedar not wanted for lumber is used there.

Growth of the Lumber Industry - The growth of saw mills in the valley was much less spectacular than that of shingle mills. A saw mill required considerable capital and a prospective lumberman had to be assured of a continued supply of timber before making such an investment. Saw mills were located close to the river or on the by so logs could be floated or towed to them; later (after 1887) they were built close to the rail line.

After the saw mills of Witter and Bennett and the Blackman Brothers proved successful, others were constructed. A mill was erected in Marysville in 1887, and in 1889, E. D. Smith built one at Lowell. When Everett was platted in 1890, a saw mill was one of the first establishments to begin operations. By 1905 there were three saw mills in Snohomish, two in Marysville, six in Everett, and three or four at various other places along the river.

The zenith of logging and lumbering was reached in the valley about 1905.

In that year 34 saw mills, 102 shingle mills and 35 logging camps were operating in Snohomish County. The mills employed 4500 men and the logging camps 1900. As roughly half the wood industries were located in the valley, these figures give a fair picture of the business.

The actual number of saw mills has varied little from that time until the present. Since most of the timber now comes from the Olympic Peninsula, British Columbia, and the lower Puget Sound Region, all mills have been moved to locations on tidewater so that logs may be towed to them. There is a small supply of logs brought by rail, truck and water from eastern Snohomish County. Although many of the plants have increased their capacity during the last thirty years, the production has actually decreased because the mills run intermittently.

As the supply of timber recedes farther from this region, the type of wood industry changes. In an attempt to make the logs pay as big dividends as possible, the mills have added lath, fuel and planing departments. Other wood industries such as veneer plants, boats works, furniture factories and pulp mills, sell a product to which considerable labor has been added.

Pulp Mills - A pulp and paper plant was located in Lowell in 1891. This plant was small and did not attract much attention until logging and lumbering were on the decline. In 1923 it was enlarged. Since that time two other pulp mills have been built in Everett. These three plants now employ about twenty per cent of the people working in the wood industries in the whole county. The later two mills secure their wood from other areas while the Lowell plant obtains most of its supply from eastern Snohomish County. The pulp and paper industry has developed rapidly in the last fifteen years and is now the most vigorous branch of the wood industries.

Trend of Wood Industries - Logging was the leading activity among the early

Snohomish settlers. It began to decline in 1881 and now only a few vestiges are left. Many trucks haul pulp wood to Everett, logs from the Monroe Logging Works are dumped into the river at Snohomish and logging trucks bring timber from the small clean-up camps to another dump in Snohomish.

Shingle and lumber manufacturing had become the most important industry by 1890 and has continued to hold first place until the present time. Because of the depletion of local raw materials, there has been a steady decline in the importance of this industry since 1910. Competition from outside areas is now so keenly felt that most of the mills are able to operate only part time.

CHAPTER V

AGRICULTURE--A PERMANENT ADJUSTMENT

Early Development - Although agriculture has long been a characteristic occupation in the Snohomish Valley, it was far outranked by wood industries during most of its history. Only since the turn of the century has agriculture become one of the leading industries.

The energies of the early settlers had been chiefly devoted to logging and lumbering or to preparing land for cultivation. Farming was a part-time job. Slow transportation by boat and lack of even a good wagon road between Snohomish and Seattle caused farmers to be entirely dependent on the logging and lumber camps as a market for their produce. The following statement made in 1877 illustrates this point: "For several months not a dollar came onto the Snohomish River from the sale of logs; the farmers were in no better circumstances than the woodsmen as they must wait for the price of products sold by them to the logging camps until returns could be secured from the mill men".[1] Shipment of fresh produce to Seattle was delayed until after the entrance of the railroad.

The first farmers were guided not only by the local demand for produce but also soon learned which crops were most profitable. Even though there was a large demand for meat and flour, the early settler found that he could not produce these commodities economically. The climate was too damp during harvest season for wheat to mature, and since fences were almost unknown, cattle would wander off in the woods. Local newspapers, with scant under-

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1. Illustrated History, Op. Cit., p. 263.

standing of the natural agricultural handicaps of these early days, made hypercritical comments on the "deficiencies" of the local farmers. In 1877 the Northern Star (Snohomish newspaper) stated, "Flour is twelve dollars a barrel and yet the local farmers do not show any interest in trying to grow this essential article". In August of 1887, the Snohomish Eye remarked, "William Whitfield and Charles Lowry drove a band (twenty head) of Yakima beef cattle over from Seattle last Friday for the Plate and Whitfield Market. To a common newspaper man, it seems as though there was 'a screw loose' somewhere, when the farmers of this valley cannot supply the local demand for beef cattle".

Hay the Leading Crop - Crops raised during the early settlement period show plainly the markets available to the settlers. Hay was the leading crop; all the lumber camps employed numbers of horses or oxen for transport and bought large quantities of feed. As early as 1864 George Walker, a settler in the Frenchy's Slough area, sold fifteen tons of hay to the Otis Wilson Logging Company for thirty dollars a ton.[1] The hay was hauled to the river's edge where the loggers could pick it up by boat. According to the census of 1881, twenty-five per cent of improved land in Snohomish County was in hay. During the first two weeks of July in 1884, between three and four thousand acres of hay was cut in the valley. Although the early markets have disappeared, new ones have been created and hay is still the leading crop. Nearly eleven thousand acres, producing twenty thousand tons of hay, are harvested annually in this region.

Oats a Secondary Crop - A second crop that was much in demand from the beginning as feed for work animals was oats. The 1880 census showed that about

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1. The Otis Wilson Logging Company was located on the present site of Lowell. E. D. Smith was a partner in this company.

one fourth of the tilled land was planted to this crop. This remained true as long as animals were used in logging; when the use of horses and oxen was discontimued with the introduction of donkey engines and railroads, the main market for local grain disappeared. Today only twenty-five hundred to three thousand acres,[1] or ten per cent of the tilled land, is planted to oats.

Upland Settlement - Valley land was most in demand and was homesteaded first; by 1863 little more was available and the newcomers began to settle on the uplands. By 1889 ten thousand acres were cleared, diked and drained and under cultivation in the valley, and twenty-five acres had been cleared for cultivation on the uplands.

Drainage and Flood Control - How to control the numerous floods and drain the land of surplus water was a perplexing problem to the early settlers. Although flooding itself seldom damaged the soil, crops were often drowned. The first farmers attempted to build dikes and dig drainage ditches even though they had little experience in handling over-flow land. By 1867 Dr. H. A. Smith had diked and drained sixty-five acres on an island at the mouth of the Snohomish. In that year a high flood over-flowed his dikes, ruined his crops, and damaged the land itself to such an extent that he abandoned the project and went to Seattle. Other early drainage attempts were: six miles of ditch dug in the Marshland area in 1883, a dike constructed by Rucker Brothers in 1894 and forty thousand dollars worth of diking and drainage on Ebey's Island by the county in 1891. Several individual and cooperative projects have been completed since then.

Near Lowell there is a cooperative pumping plant which lifts the water from a drainage ditch into the river. After a flood when the water is

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1. See Agricultural Survey at the end of this chapter.

receding, this plant helps in removing surplus water. Another plant located near the mouth of French Creek in the Shorts area, is also used mainly to pump flood water. In the lower part of the river, gates are placed at the end of drainage ditches. These are closed during flood times and at high tide; when the tide is low the gates are opened and water drained from the ditches.

All these devices are successful in eliminating surplus water before it becomes so stagnant that it damages the soil; but all the dikes, ditches and pumps can do nothing to prevent floods. In many instances after a spring flood, plowing and planted is retarded until water can be pumped out.

Development and Position of Dairying - The first dairy cow in the valley was Mrs. Sinclair's "Rose" brought in by boat in 1864 and now famous in Snohomish history as the progenitor of most of the early milk cows used by the first homesteaders. In the early 1870's, Clark Ferguson sold milk in the town of Snohomish. The first extensive commercial attempt at dairying was made by J. B. Roberts in 1883. He had twenty-seven milk cows brought in on the Steamer "Nellie". A little later the same year he had twenty-five more dairy cows delivered by the same steamer. Encouraged by Roberts' success, other farmers built up dairy herds and soon the milk production was sufficient to warrant the building of the first creamery at Snohomish in 1894.[1] The next year a cheese factory was built and proved successful and by 1897 a creamery department had been added to the cheese factory, which in that year paid fifteen thousand dollars monthly to farmers in the valley.

When a large condensary was built in Monroe between 1900 and 1910, many farmers began to send their milk to this new plant. In 1920, the Snohomish

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1. This creamery failed because of mismanagement.

County Dairymen's Association bought plants at Snohomish, Arlington, and Everett. The Snohomish division now specializes in ice cream, butter and cheese, while the Everett plant has a large retail fresh milk division that delivers milk to homes in Everett and surrounding communities. A small quantity of milk is sometimes shipped from the valley to Arlington where it is evaporated and canned. There are also numerous private creameries and dairies.

Fresh milk and cream were shipped to Seattle soon after the railroad reached Snohomish. Now several large milk trucks make daily trips from the farms in this region to dairies in Seattle.

A climate favorable for dairy cattle, both soil and climate suitable for hay and pasture, and growing urban markets in Everett and Seattle have combined to enlarge the dairy industry from Roberts' small herd in 1883 to over six thousand cattle[1] in the valley at present.

Vegetable Production - All early farmers raised vegetables for their own use; if there was any surplus it was sold in the nearby camps and towns. When the towns were large enough to provide a good market, several farmers in favorable locations began to specialize in market gardening. Many vegetables are now grown on the damper lowland in all parts of the valley, but the main acreage is found along the east side of Ebey Slough, close to Everett, and on the peat soils in the northern arm of the upper valley.[2]

Vegetables are now the second important crop in the valley with three thousand acres planted annually. About half the acreage is in potatoes,

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1. See Agricultural Survey at end of chapter.

2. A vegetable farm containing over two thousand acres was located close to the Great Northern Railroad. It specialized in lettuce for several years but has now diversified.

with peas and lettuce ranking next. Most of the vegetables are taken fresh by local markets, but there is some canning, and part of the pea crop is frozen and shipped to other parts of the United States.

The damp soils and mild climate permit vegetables to ripen slowly, thus allowing considerable time for harvesting. This gives the Snohomish Valley an advantage over other areas where vegetables ripen quickly, often forcing the farmers to hire large crews at considerable expense.

Fruits were among the early crops planted in the valley. Most settlers tried to grow several varieties as it was almost impossible to import fresh fruit from other regions. If a farmer had any surplus, he sold it in the local markets. Today, most farms grow a variety of fruits, but berries are the only one raised in commercial quantities. Berry farming has tended to become localized because of soil conditions. Around Marysville about one hundred fifty acres of strawberries are grown on the Lynden sandy loam which drains more rapidly than the soils in the valley proper. The drainage permits the soil to heat more rapidly in the spring, causing the berries to color and ripen early. Other types of berries are grown in scattered sections. There is approximately three hundred acres of fruit in the whole region.

Minor Position of Poultry - The poultry industry is generally concentrated on fingers of well-drained upland which project into the valley, rather than on the richer valley lands which are also the wetter lands. Poultry does not thrive on damp soils. While not so well adapted to most types of agriculture, the better drained slopes and upland are favorable for poultry raising. On the well-drained areas around Marysville and in the Pilchuck Valley a few chicken ranches are found. Their number is not likely to increase, however, because very little suitable land is left.

Summary - With the area under cultivation steadily increasing and more people engaging in agriculture, farming had grown to be one of the important industries of the Snohomish Valley by the beginning of the twentieth century. Its importance in relation to other industries has continued to increase since then. The twin resources of good soil and favorable climate plus the expanding markets in the Puget Basin have helped agriculture to attain its present healthy condition.

AGRICULTURAL DATA--SNOHOMISH RIVER REGION

BASED ON SURVEYS CONDUCTED BY ARNOLD SMITH

COMMUNITY	SURVEY NUMBER	NO. ACRES IN FARMS SURVEYED	EST. % OF ALL LAND IN AREA	EST. NO. OF CULTIVATED ACRES	OATS	HAY	BERRIES	TRUCK	MISC.	DAIRY CATTLE
SWANS TRAIL	9	408	65	700	-	650	-	10	50	300
LOWELL LARRIMERS	37	1682	95	1500	-	1400	-	-	100	1000
SNOHOMISH LARRIMERS	55	4178	93	4000	350	2500	-	150	350	1500
LOWELL SNOHOMISH	18	1272	98	1200	100	700	-	50	350	900
RIVER NORTH SIDE	15	451	95	450	75	300	-	-	75	600
ROOSEVELT	17	842	25	2700	50	600	-	1800	250	400
SNOHOMISH MONROE	27	2059	93	2000	500	700	-	200	600	500
RIGHETTI ROAD	10	1328	97	1200	125	900	-	-	175	450
PILCHUCK	80	4974	95	3000	150	2200	50	100	500	300
CHERRY AVENUE AND WEST	-	-	-	2000	1000	500	-	100	400	150
HOME ACRES	-	-	-	1000	75	100	100	500	225	75
TOTAL	268	17194		19750	2425	10550	150	2910	3075	6275

These date were obtained to help in planning flood control. The survey was conducted by the County Agricultural Agent in 1934 and 1935. There are no figures available for the Delta Region.

CHAPTER VI

THE SETTLEMENT PATTERN--URBAN AND RURAL

First Settlement Pattern - The Snohomish River was the main factor that influenced the primary distribution of population in the valley. Along this stream the early logging camps and trading posts were founded; these were the nucleii of several small settlements. In turn, the most favorably located of these early settlements became the permanent towns of today. The first town to be started in the valley was Snohomish itself. Its development has been generally paralleled by that of the smaller permanent towns of Marysville and Lowell.

Development of Snohomish - As previously stated, the present site of Snohomish was tentatively selected as the crossing point for the projected military road, and so was speculatively homesteaded by three men in 1860. E. T. Cady immediately began to trade along the river with his scow, Minnehaha. He would go to Mukeltio, get some supplies and bring them to his claim at Snohomish, then visit the various logging camps; his trading post was at first called Cadyville. Four years later, E. C. Ferguson, another of the three original settlers, also built a store and made application for the establishment of a post office, to be called Snohomish City, rather than Cadyville. That same year, W. Sinclair bought Cady's claim and started another store, which failed, it is said, because it had no saloon. Ferguson's store, with the Blue Eagle Saloon attached, was highly popular and a profitable venture for its owner. Soon another store (with saloon) and a blacksmith shop were constructed, and according to the census of 1880, the town had by that date grown to one hundred forty-nine people. By this time, Snohomish was a recognized trading

and entertainment center for homesteaders and loggers, who came from as far up-river as Skykomish, approximately sixty miles away. Since there was at this time no large town closer than Seattle, the twenty-year-old river village also drew considerable custom from the margins of the Sound to the west. This was aided by regular boat service between Seattle and Snohomish, from which a smaller river boat ascended as far as Sultan.

A description of the village by a woman residing there in 1886 says: "It (Snohomish) is a town of seven hundred inhabitants with over two hundred men that work in the woods and spend their money there. It has four general merchandise and dry goods stores, two grocery, two confectionary and tobacco stores, two poor hotels, two livery stables, five saloons, two blacksmith and wagon shops, one furniture factory, one saw mill, two boot and shoemakers, one millinery, one doctor, three lawyers[1], and two printing offices[2]".

Although the other two settlements, Lowell and Marysville, were not started in quite the same manner, they served the same purpose in their localities.

The Influence of Saw and Shingle Mills - The building of mills and enlargement of logging camps increased the demand for laborers. These factors and the completion of the first railroad to this region in 1887, caused the population to grow rapidly in the valley, and even more rapidly in the towns.

Snohomish's growth curve shows how closely urban development was tied up with the expansion of the lumber and shingle business. Just before the beginning of this period in 1884, its population was estimated at four

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1. Three lawyers in a town of seven hundred might seem out of proportion, but litigation between early homesteaders and the railway companies over prior claims to certain lands provided an ample living for these early barristers.

2. Snohomish Eye, July 31, 1886.

hundred. Six years later (census of 1890), it had jumped to 1993. During this time several shingle and saw mills had been built in or near the town, while the railroad had made connections both to Seattle and the Canadian boundary. During the next twenty years the town grew steadily. In that time, besides saw and shingle mills, a creamery, a cannery and an iron works as well as more grocery and dry good stores were added.

The Present Day Snohomish - Between 1910 and the present, the entire industrial complexion of the town has changed. All the saw and shingle mills have been moved or dismantled. All logging and lumbering companies have moved their headquarters elsewhere. Today Snohomish may be classed as a town dependent mainly on its agricultural hinterland. The canneries employ few people except during the fruit and vegetable season, and not more than twenty people in all are on the pay roll of other industries. Trade of the surrounding agricultural community is Snohomish's most important source of income. Few of the grocery, meat, dry goods and hardware stores could exist, except for the farmers. A secondary factor in the community's economic life is provided by a number of people who live and do their buying in Snohomish, but who work in Everett, Seattle, or in one of the nearby logging camps or mills.

Marysville and Lowell have had a somewhat similar development on a smaller scale, but they have not had a population decrease. A large pulp mill, a saw mill and a box factory have kept Lowell's population from actually declining. Marysville has been able to keep some of her wood industries because of her location close to the Sound, and a main highway built through the town has brought some transient trade.

Everett a Factor Influencing the Valley - Although not included within the Snohomish Valley, and consequently not a direct part of this analysis, the city of Everett on the valley margin must be described briefly, especially

as regards its effect upon the development of economic activities in the valley. Until 1889, Snohomish County had no settlement directly upon Puget Sound, although a few people lived within what has since become the town site of Everett. In 1890, several Tacoma men began buying up land in the area. Together with the newly-formed Everett Land Company, they drew up a promoters agreement to plat the land and establish a "planned" industrial city on this site. The agreement signed and filed in November, 1890, provided for:

1. A sawmill with a capacity of 100,000 board feet daily to be built in less than eighteen months.
2. A railroad connection between Everett and the Lake Shore Line to be started immediately.
3. A branch of the American Steel Barge Company costing not less than $150,000 to be finished within four years.
4. A dry dock costing not less than $35,000 to be constructed within four years.

Although the provisions in this agreement were altered at least seven times, the main ideas were followed.

<u>Everett a Planned City</u> - The promoters planned to base the city's growth on metal and wood industries, so saw and shingle mills, a smelter, a nail mill, a steel barge works and a dry dock were built. The metal industries did not grow because the basis for them was unsound, and the expected rich mineral deposits in eastern Snohomish County did not materialize. The proper bases for the timber industries were present, however, and Everett had an immediate boom as a planned wood-working city.

From the handful of settlers and promoters located there in 1890, the city shot up to 24,000 in 1910. Lumber and shingle mills accounted for the larger part of this growth and provided the bulk of Everett's ample payroll.

Transportation facilities were superior, including an electric rail line connecting Snohomish and Everett, the main line of the Great Northern to Seattle, motor roads to the larger towns in the county, and excellent dock accomodations for coastwise and oceanic shipping.

Everett Since 1910 - From 1910 to the present, Everett has had a gradual development. The wood industries have gone through a period of reorganization because the timber, which was formerly furnished by the logging camps in Snohomish County, is imported mainly from the Olympic Peninsula, British Columbia, or the lower Puget Sound Region. The added cost of this timber, due to a longer haul, has forced the wood industries to seek means to conserve raw material and make it pay bigger dividends. The mills have been enlarged, adding fuel, lath, and planing departments, while other types of wood industries such as veneer plants, furniture factories, and pulp mills which do a great deal of processing have been erected. Thus the wood industries, by adding considerable labor to the raw material to get a finished product, are attempting to sell more labor and less material. Since 1930, two large pulp mills have been erected in the city and have prospered because cheap electric power, large quantities of pure water, and good transportation facilities make this an excellent location for this type of industry.

With its superior size and location, Everett has added a number of minor industries including salmon packing plants, boat works, creameries, oyster canning plant, egg and dairy cooperatives, stove works, etc.

The Relationship of Everett to the Valley - The relationship between Everett and the valley is of benefit to both, even though the powerful pull of a county seat of 30,000 people on a nearby farm area of less than 15,000, tends to draw many activities to the larger center. During its first period of development, much of the timber used in Everett mills was transported through

the valley from camps in eastern Snohomish County. Although most of the logs are now brought from outside, Everett uses many agricultural products from the valley. Butter, eggs, poultry, vegetable and fruits raised in this area are consumed in Everett.

From the first, Snohomish had been the county seat. Alarmed by rumors of the projected city on the Sound, which might become a political rival, Snohomish rushed the building of a new courthouse. The corner stone was laid in 1890. Everett grew so rapidly, however, that by 1893 it was able to win an election contest and wrest the county seat from its older valley rival. This election was marked by charges of fraud on both sides; voters from Seattle having been imported by each. After many heated arguments, several physical encounters, and a long legal battle, Everett emerged as the winner, and the county seat was finally established there in 1897.

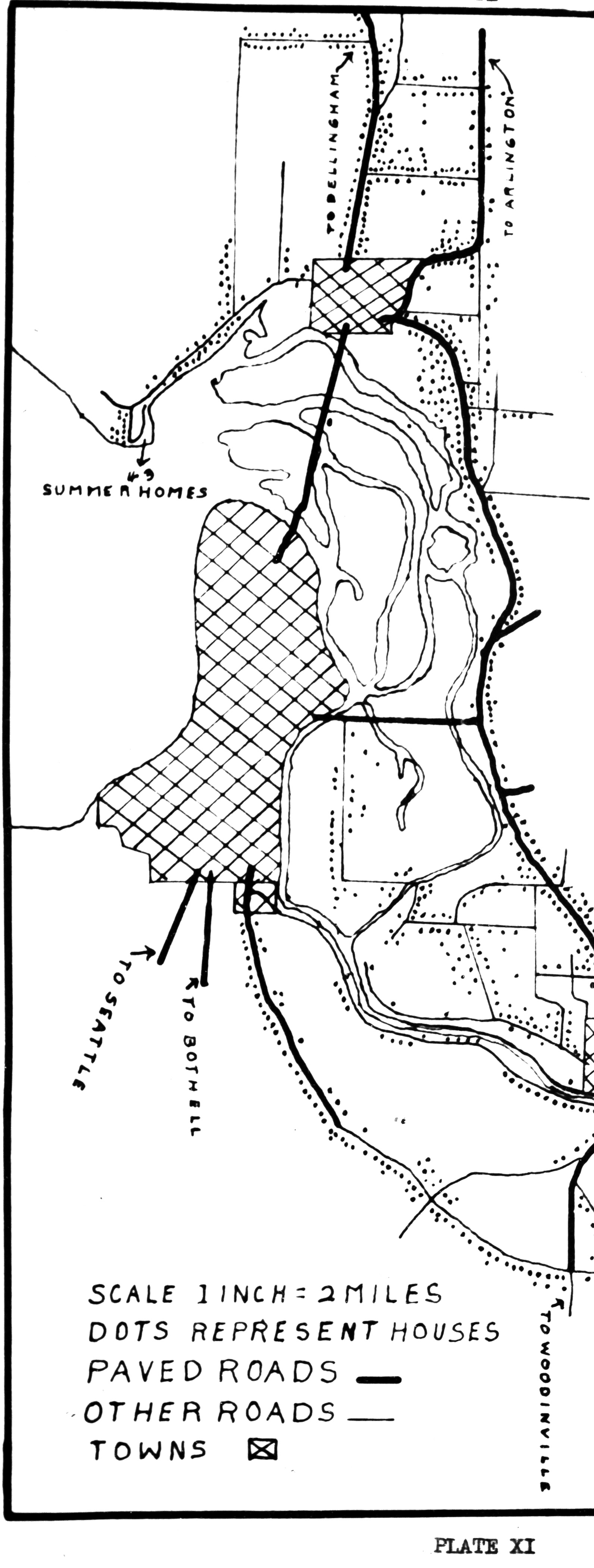
In addition to this political victory, Everett soon demonstrated its ability to become the industrial center for the entire surrounding territory, including the valley. The wood-working industries of Snohomish kept on growing steadily until about 1910; during this same period, lumber and shingle mills in Everett grew many times faster. It was during this period that the great Weyerhaeuser interests selected Everett for their second center of West Coast operation (the first being at Tacoma). Following 1910, wood-working in Snohomish began to decline gradually, but the same business expanded still further in the City on the Sound. In a few instances, lumber concerns, such as Blackman Brothers, left the valley to relocate in the county seat. By 1920, it was apparent that Everett would be the eventual industrial center for practically every manufacturing business in the adjacent territory. The main offices of the Puget Sound Power and Light company, the dairy and poultry cooperatives naturally located here, as did many smaller crafts and factories.

Today, manufacturing is a minor activity in the valley, most of it having gravitated to Everett.

It must not be inferred that the valley has been entirely the loser in this inevitable sorting out of functions. The agricultural lowland to the east receives many advantages from its close association with an industrial city of this type. In addition to becoming the main shipping center for the surrounding area, Everett is supplying a number of goods and services which the valley would be unable to provide for itself as efficiently. The Everett newspaper is normally taken and read by a majority of the farmers and small townsmen, and even keeps a salaried correspondent in Snohomish. Bread, ice cream, bottled drinks, etc., are delivered daily throughout the valley by Everett firms. Many valley workers find regular employment in the mills and factories of Everett, returning at night to their homes, and spending their earnings in the smaller towns. In many other ways the close reciprocal relationship between industrial city and agricultural valley is a profitable one for both.

In spite of the fact that Everett gets its mill logs and much of its trade and business from other areas, it needs the agricultural produce from the valley and the trade of its people, while the valley in turn is dependent on Everett markets and services.

<u>The Population Pattern of the Valley</u> - The population pattern in the Snohomish Valley is largely fixed by two geographic factors; first, the river pattern, and second, the bench line of freedom from floods. The thin and oft-interrupted line of earliest settlement followed the main river and was made up of logger camps and trading posts, with a few scattered homesteads. As logging operations and homesteading increased, the population line moved back from the river, gradually reaching the edges of the valley.



DISTRIBUTION OF HOUSES IN THE SNOHOMISH RIVER VALLEY

PLATE XI

The urban pattern shows clearly the influence of floods, since all the towns in the valley today are located, not on the floor which is subject to overflow, but on the slopes, usually at the first bench line of safety. Between these towns main highways have been built, which also follow along the edges of the slope just above high water. Along or near these routes the residents have built their farmsteads, also with the primary motive of flood avoidance.[1] It is this geographic causation which is responsible for the peculiar population pattern, forming a ring almost around the valley, with only a scattered minimum of farmsteads on the center floor.

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1. See Plate XI, Page 51.

SUMMARY

By analyzing and evaluating the factors which have operated to produce successive periods of adjustment in the Snohomish Valley, it is possible to point out some of the future trends in this area.

Period of Raw Timber Exploitation (1858-1885) - The Snohomish Valley has gone through three distinct periods of development, each based upon a different type of resource utilization. The first was the period of raw timber exploitation, in which logs were cut and floated down to the Sound. Enormous quantities of this local raw material were handled with scant profit to the valley. Most loggers were temporary residents, cutting timber as fast as possible, with the intention of later moving to the next area of exploitation. A few permanent settlers were clearing small patches of land. Farming was a part-time activity on what few acres could be cleared, while engaging in what most homesteaders regarded as their major occupation--logging. Population was scant, the river was the main transport artery, and towns were few and small.

Period of Timber Industries (1885-1910) - The second period began about 1885 when timber operators built mills for the purpose of making greater profits by selling lumber, shingles and other manufactured wood products. Most of the timber had already been stripped from the valley, but large quantities of suitable logs were available on the neighboring uplands, which for many years were to feed the new mills located in the lowland. The advance in utilization of a basic resource, timber, brought larger pay rolls, more population, greater urban development, and general prosperity. Stimulated by lumber money, the villages developed into bustling towns.

By this time, most of the valley land had been cleared, diked and drained. Dairying, vegetable-growing and fruit-raising had expanded to supply the local mills, and a small surplus of farm products was also shipped out. Lumber and shingles, however, still dominated the local picture, and were the basic source of valley income. During this period, also, Everett arose as a wood-products rival, with a tide water location superior to that of any mill town in the Valley.

Period of Agricultural Expansion (1910 to date) - The third period, which began about 1910, was marked by a thorough-going reorganization of the entire basis of valley existence. Gradually the final stands of raw timber were cut from the nearby hills, and the valley wood-working plants were shut down one after another. Some of the once numerous wood industries remain, including a few small clean-up shingle mills, a saw mill,[1] a pulp mill--but lumber dominance is now a thing of the past. As a result, the towns are attaining the proper size for their new adjustment--that of supplying a region which is seventy per cent agricultural.

During this period, agriculture has improved steadily and has become stabilized into a permanent pattern. Land has become better drained, soils aereated, and farm buildings improved. Intensive farming is being successfully practiced, with dairying and market-gardening as its most remunerative branches. The population has become stabilized, also, with a present upcurve which is about the same as the normal American increase from one decade to the next. In the present division of functions, the valley has become definitely agricultural, surrendering all industrial claims to the county seat, Everett, strategically located on the Sound.

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1. Four of the Everett saw mills are actually located on valley lowland along the Snohomish River, but are obviously part of the Everett industrial district.

Possible Future Adjustments - A careful analysis of local resources and possibilities brings the investigator to the inevitable conclusion that the future of the Snohomish Valley lies in still greater improvement and refinement of its agriculture. If second growth timber should again become available on the surrounding non-agricultural uplands, it would be far more economical to transport it the short distance to Everett mills than to rebuild the present decadent valley mills. The same would be true of any other industrial raw material.

The valley soils and its modified marine climate, however, are assets which are permanent, if wisely handled. The similarity of the valley to certain areas in the Netherlands has often caused remark--the marine climate, the damp, rich, flooded soil, the draining and pumping, the all-the-year grass supply, the excellent dairy products. In the years to come it may be possible for the Snohomishlander to parallel the Netherlander in his intensive and careful production of butter, cheese, vegetables, fruit, poultry, eggs, and perhaps even bulbs. The natural conditions are present; success will rest on better agricultural science and education. Handled with Dutch craft and thrift, fertile farms of the valley, with the industrial cities of the Sound for their markets, should in time be able to provide their owners with a comfortable living, as well as a well-adjusted social life.

BIBLIOGRAPHY

Eckman, Leonard, Geography of Occupance in the Skykomish Valley, Thesis for Master of Arts Degree, University of Washington, 1937.

Everett Herald, June 30, 1906.

History of Snohomish County, Wm. Whitfield, Editor, Pioneer Historical Publishing Company, Chicago, 1926.

Illustrated History of Skagit and Snohomish Counties, Interstate Publishing Company, Chicago, 1906.

Lewis, James, Snohomish County, Washington--Past Achievement and Present Status, In connection with commercial organizations, 1914.

Northern Star, Snohomish newspaper, Vol. 1-2; January 15, 1876 to December 22, 1877. Published 1872 to 1879.

Oral information from the following residents of the Snohomish Valley:
Ed Deering, Dave DeSelle, George T. Hendrie, Miss Lottie Johnson, Sam Knapp.

Personal work done in the field.

Preston, Arthur, Fifty Years in Snohomish, talk given at a Masonic Meeting, spring, 1936.

So Long Jigger Jones, S. T. Holbrook, Saturday Evening Post, July 8, 1939.

The Eye, Snohomish Newspaper, Vol. 1, no. 35; Vol. 3, no. 7; Vol. 12, no. 23, September 6, 1882 to February 27, 1884.

The History of the State of Washington, Vol. II, Lloyd Spencer, Editor in Chief, American Historical Society, 1937.

The Northwest Magazine, Vol. 11, numbers 3, 5, 11, 12; 1892 and 1893. Published in St. Paul, Minnesota.

The Oregonian's Handbook of the Pacific Northwest, Edward G. Jones, Editor, Morning Oregonian, 1894.

United States Bureau of Census, Official Census for 1870, 1880, 1890, 1900, 1910, 1920, 1930. Figures on agriculture, population, and manufacturers for Snohomish County.

United States Bureau of Census, Population by Counties and Minor Civil Divisions, 1890, 1900, 1910.

United States Bureau of Census, Report on Manufacturers for 1933.

United States Department of Agriculture, Bureau of Soils, Reconnaissance Soil Survey of the Eastern Part of Puget Sound Basin, Washington, A. W. Mangum and Party, 1911.

United States Department of Agriculture, Forest Service Bulletin No. 74.

United States Department of Agriculture, Weather Bureau, Seattle, Washington, Summary of Weather Data for Western Washington, 1930. Climatilogical Data, published yearly for years 1931 to 1938 inclusive.

United States War Department, Engineers Report to United States Congress, House of Representatives, 73rd Congress, 2nd Congressional Session, Document 256.

Wellman, T. L., Early Means of Transportation in Snohomish County, Thesis for Master of Arts Degree, University of Washington, 1932.