

## PART III

## Physical Description

Physical Regions of Washington

On the basis of surface features, Washington may be divided into eight general regions. Agricultural settlement is influenced by factors of topography, climate, soil, forest vegetation, and water resources distinctive to each of the physiographic regions. Each has become a different type of farming area as settlers have learned to adapt crops and livestock to the conditions, or have improved limitations through drainage or irrigation.

Coastal Plains

A narrow, sandy plain with shallow bays, tidal flats, stream deltas, and low headlands lies between the coastline and the Coast Range. It extends from the Columbia River mouth almost to Cape Flattery, being widest and lowest in the Grays Harbor and Willapa Bay districts. The climate is mild and damp with a long growing season, but it is too cool, cloudy, and wet for most crops. Originally this area was covered with heavy forests and much is now covered with woodlands. Lumbering and manufacture of wood products is the main industry. Farming is largely of the livestock and dairying type on low uplands and drained areas in the lower Chehalis River Valley. Cranberry growing is important and well-adapted to numerous, boggy areas in the Grays Harbor and Willapa Bay sections. The shallow bays are also used for oyster culture. Fishing is common in the rivers and coastal banks.

Coast Range

The Coast Range is an uplifted area of sedimentary and metamorphic rocks divided into the Olympic Mountains and the Willapa Hills. The Olympics tower to nearly 8,000 feet in a dome-like structure, carved deeply by rivers. These mountains have the heaviest precipitation in the state. Snowfields and heavy forest cover the mountains. Most of the wilderness area is within the Olympic National Forest and Olympic National Park, being managed for recreation, wildlife, and timber. Farm settlement is limited to some foothill river plains and coastal terraces such as the Dungeness and Port Angeles districts along the Strait of Juan De Fuca. Here in the lee of the mountains, rainfall is moderate and irrigation is practiced by some livestock farmers. The Willapa Hill country is wet, heavily forested, and carved into numerous narrow valleys. Logging is the main industry, combined with livestock farming in the upper Chehalis River Valley and along the banks of the Columbia River. Wet climate, hilly topography, and the difficulty of clearing stump land retards agriculture.

Willamette-Puget Sound Lowland

A broad lowland, described as a trough or valley, lies between the Coast Range and the Cascade Mountains. The northern part is the Puget Sound

Lowland which has been glaciated and occupied by the sea in the lowest sections. The continental glacier reached slightly south of Olympia. Under a warming climate it melted and geologists believe it receded about 25,000 years ago, leaving an infertile plain of moraines and outwash gravels, sands, and clays known today as the Puget Glacial Drift Plain. Its rolling surface has numerous lakes and bogs. Most of the major cities--Seattle, Tacoma, Everett, Bellingham, and Olympia--have been built on moraines bordering the Sound. Rivers such as the Nooksack, Skagit, Snoqualmie, White, and Puyallup built up deltas and flood plains over the older gravelly plains. These narrow valleys are more fertile than the older glacial plains, and support numerous small dairy, vegetable, and berry farms. Most of the gravelly areas are wooded with a second-growth forest and are used for pastures. In the southern part of the Willamette-Puget Sound Lowland, there are two large valleys--the Cowlitz and Chehalis. They drain a low, hilly area with several flat prairies and bottom lands.

Agriculture is handicapped by poor drainage and flooding of the river deltas and plains, by heavy winter rainfall, by cloudy, but dry summers, by coarse, gravelly upland soils, and by densely wooded land which is costly to clear. Advantages are mild climate and a location close to major markets for farm products such as milk, poultry, and vegetables.

### Cascade Mountains

The Cascades are a wide and high topographic and climatic barrier which separates western and eastern Washington. The range is made up of sedimentary, igneous, and metamorphic rocks which have been carved by glaciers and streams. High isolated volcanic cones of lava such as Mt. Adams (12,307 feet), Mt. Rainier (14,408 feet), and Mt. Baker (10,791 feet), appear upon the older Cascade rocks. The Cascade crest varies between 10,000 and 3,000 feet and is higher and more rugged in northern Washington. Roads and railroads have been built across its lower passes in central and southern Washington. The Columbia River has cut a deep gorge and the lowest pass through the barrier. The western slope is wet and heavily forested with Douglas fir. The eastern slope is drier with a less-dense pine forest. Nearly all classified as forest land, most of the area is in Federal ownership in five national forests and Mount Rainier National Park. Tree fruit farming in the eastern slope valleys of Wenatchee, Chelan, Methow, Naches, and the Columbia Gorge is most important. Sheep and cattle summer grazing on alpine grasslands is another use. Deep western slope valley bottoms such as the Skagit, Snoqualmie, Nisqually, Cowlitz, and Lewis also contain livestock farms. The area is vitally important as a source of water for irrigation and city drinking water and as a source of timber. Steep terrain, wet climate, short growing seasons, and heavy forest vegetation are main handicaps for agriculture.

### Columbia Basin

A low plateau of old lava rocks covered with stream and wind-deposited soils extends in a series of plains, ridges, coulees, and hills from the Cascades to the eastern Washington border. The area is basin-like in structure, being higher around its margins and sloping inward to low and level central plains. It has been sharply eroded by the Columbia River and

its interior tributaries, the Snake, Yakima, Palouse, and Spokane Rivers. The basin has sub-areas created by crustal movements and erosion.

The Yakima Folds are a series of hilly ridges extending from the Cascades eastward into the lower part of the basin. The Yakima and Columbia Rivers have cut gaps through the ridges, and built up plains in the troughs between them. The rich, alluvial plain of the Yakima River is an important irrigated valley.

The Waterville Plateau is a tableland of thin soils overlaying basaltic rock at an elevation of 2,500 to 3,000 feet. It has gorges cut by the Columbia River and ancient glacial outwash streams once flowing in Moses and Grand Coulees. It is too high for irrigation and is used for dryland grain and livestock farming. The high plain is often called the Big Bend country.

The Channelled Scablands is a belt of dry terrain carved by ice-age rivers into a series of coulees. Bare rock is exposed in the coulees. Small plateaus between the old river channels have thin soils used for dryland farming. The Grand Coulee of this region has been developed into a major irrigation reservoir.

The Palouse Hills consist of fertile deposits of wind-blown soil overlaying basaltic lava flows. After being deposited in large dunes, the formation was reshaped by streams into an intricate pattern of low, rounded hills which are tilled for wheat, barley, and legumes. The hills receive 16 to 25 inches of rainfall and have deep, porous and fertile soils. It is one of the richest farming areas of the Pacific Northwest.

The Central Plains are low and relatively level expanses of soil, deposited by old streams crossing the Channelled Scablands and later by the flooding of the Yakima, Columbia, Snake and Walla Walla Rivers. Climate is desert-like (6-12 inches of precipitation per year). The lower lands of the area, the Quincy and Pasco Basins and the Walla Walla valley, are irrigated. Quincy Basin is a new irrigation area watered by Grand Coulee Dam.

Agricultural handicaps in Columbia Basin regions are mainly found in its dry, continental climate. Large irrigation systems built since 1900 have overcome much of the need for water on rich valley and basin soils. Dryland farming in higher areas is practiced widely, although occasional variations in rainfall, lack of snowfall, winter-kill, water and wind erosion inflict damage to field crops and to livestock ranges.

#### Okanogan Highlands

A portion of the Rocky Mountains, consisting of well-eroded old granites, lavas and sedimentary rocks extends across north central Washington. These are the Okanogan Highlands, the state's richest mineral area. Summit levels reach 4,000 to 5,000 feet with peaks exceeding 7,000 feet. Prominent north-south valleys are occupied by irrigated tree fruit and livestock farms. These are the Okanogan, Sanpoil, Kettle, and Colville Valleys. The Columbia River gorge through the Okanogan Highlands is occupied by the large man-made

lake behind Grand Coulee Dam--Roosevelt Lake. High and wetter portions are forested with pine and larch, and are managed for timber and for livestock ranges by the United States Forest Service and the Bureau of Indian Affairs. Cold winter temperatures, short growing seasons, dry valley climates and distance from markets are farming handicaps.

### Selkirk Mountains

The Selkirks, a range of the Rocky Mountain system, extend into the northeast corner of Washington. The rocks are old mineralized granites and metamorphics reaching elevations over 7,000 feet. The Pend Oreille River Valley at the base of the Selkirks is an agricultural area of narrow bottom lands settled by livestock farmers; Nearly all of the uplands are in Kaniksu National Forest. While climate is cool and growing seasons are short, the Pend Oreille Valley has an advantage of being closely located to the Spokane metropolitan market area.

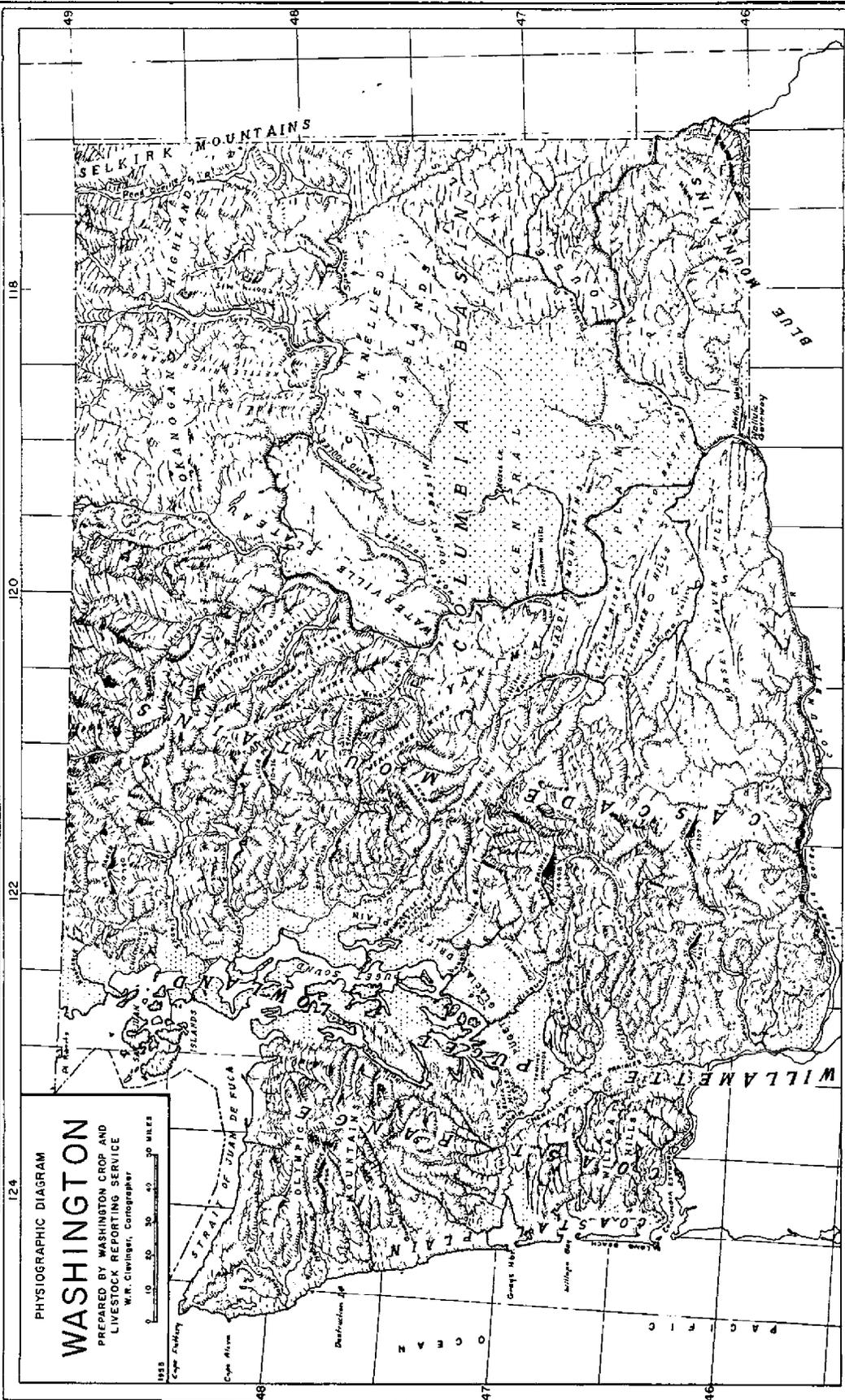
### Blue Mountains

The Blue Mountains are an uplifted and eroded plateau extending into the southeastern corner of Washington. The strata are mainly ancient crystalline rocks which contain some minerals. The highest point of the mountains in the Washington section is Diamond Peak (6,401 feet), on the divide between the Grande Ronde, Tucannon, and Touchet Rivers. These rivers, and the Walla Walla River, have cut valleys into the plateau. Extensive pine forest and grassland areas are in the highlands within Umatilla National Forest, where rainfall is 30 to 40 inches. The Snake River has cut a deep valley and gorge across the lower parts of the mountains. The area is well developed agriculturally around its northern foothills where wind-blown soils are deep and irrigation systems are used. The Walla Walla and Tucannon Valleys are rich grain, legume and livestock areas grown under irrigation and by dry farming. Grazing is an important use of the high lands by livestock ranchers in the upper valleys.

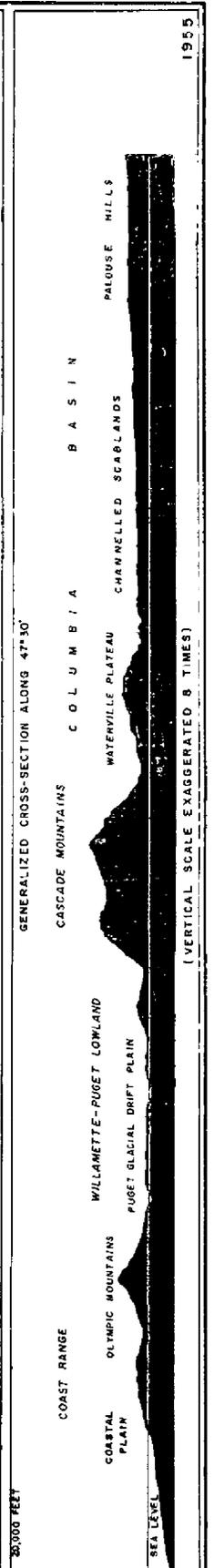
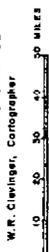
### Topography of King County

Sharp contrasts characterize the topography of King County. It varies from sea level on Puget Sound to the summit of Mount Daniel, 7,986 feet. This difference in elevation occurs within a distance of 65 miles from Elliott Bay at Seattle to the crest of the Cascade Mountains.

About two-thirds of the county lies in the generally rough terrain of the Cascade Mountains and foothills. The remainder, which is the main populated and agricultural zone, is in the Willamette-Puget Sound Lowland. About 15 to 20 miles to the east of Puget Sound, the forested Cascade foothills rise abruptly. The Cascade Range crest forms the eastern border, and varies from 3,450 to nearly 8,000 feet high. One uplifted ridge, the Newcastle Anticline, extends westward from the Cascades nearly to Seattle. Erosion of this uplift by the Dedar River drainage system exposes numerous beds of bituminous coal and mining of these beds was important between 1880 and 1930. One of the lowest gaps or passes in the Washington Cascades is Snoqualmie Pass (3,010 feet) east of Seattle. It is the main rail and highway route connecting the Seattle area to eastern Washington. Stevens Pass (4,061 feet) northeast of Seattle is



PHYSIOGRAPHIC DIAGRAM  
**WASHINGTON**  
 PREPARED BY WASHINGTON CROP AND  
 LIVESTOCK REPORTING SERVICE  
 W. R. CUMINGS, Cartographer





the second most important road and railway route across the mountains of eastern King County. Stampede Pass (3,800 feet), the third route across the mountains, is used by railroads only.

Five valleys cut into the mountains by ancient glaciers and later by streams are important features of eastern King County. The upper Snoqualmie and Skykomish Valleys have been settled by people occupied in forest work, construction and some part-time farming. The upper Cedar River is the watershed for Seattle, and no settlement or outdoor recreation is permitted. The upper Green and White Rivers are forested areas where there is only limited agriculture.

The western third of King County lies in the Puget Glacial Drift Plain. Its features were largely formed by the Pleistocene continental ice-age period of comparatively recent geological time. The last deep ice sheet covering Puget Sound is termed the Vashon glaciation. Study of the clay and gravel deposits on Vashon Island and of bogs elsewhere indicates that the ice sheet receded 10,000 to 25,000 years ago. As the ice retreated northward, a deep mantle of gravel, sand and clay was deposited in plains and heaped in sloping moraines 100 to 500 feet above sea level. Numerous lakes and ponds were left in the uneven surface as the ice sheet melted. The two major lakes of King County--Washington and Sammamish--as well as many smaller lakes and bogs were formed during the glacial period.

From an agricultural standpoint the most important topographic features are the river flood plains. The Green, Duwamish, White, Sammamish and Snoqualmie Rivers have laid down fertile deposits of silty and sandy loams which are good for farming. These valleys are but a few feet above sea level. When rainfall and snow melt is heavy in the Cascades the rivers sometimes overflow flooding the farmlands. The valley bottoms are surrounded by the gravelly uplands deposited by the earlier ice sheet.

#### Land Classification and Soils

In general, mountain building and the wide deposition of rocky material by the continental glacier have not resulted in a favorable surface or soil for agriculture in the greater part of King County. Productive land is limited to the narrow, valley flood plains and to some terraces, old lake beds and flats scattered over the uplands and on Vashon Island. The land is divided into eight general classes ranging from excellent for farming to rocky, mountainous areas unsuited for any type of farming. Soil scientists have mapped a large variety of soils, consisting of 88 types. <sup>1/</sup>

Class I and II lands which are the best for farming are confined to the bottom lands of the Green River, the Snoqualmie and Sammamish Valleys and to some flatland terraces around Enumclaw and North Bend. The largest district of class I land is in the Green River Valley between Auburn and Kent. The

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<sup>1/</sup> U.S. Dept. of Agric., Washington Agriculture Experiment Station and Washington State Planning Council, Soil Survey, King County.

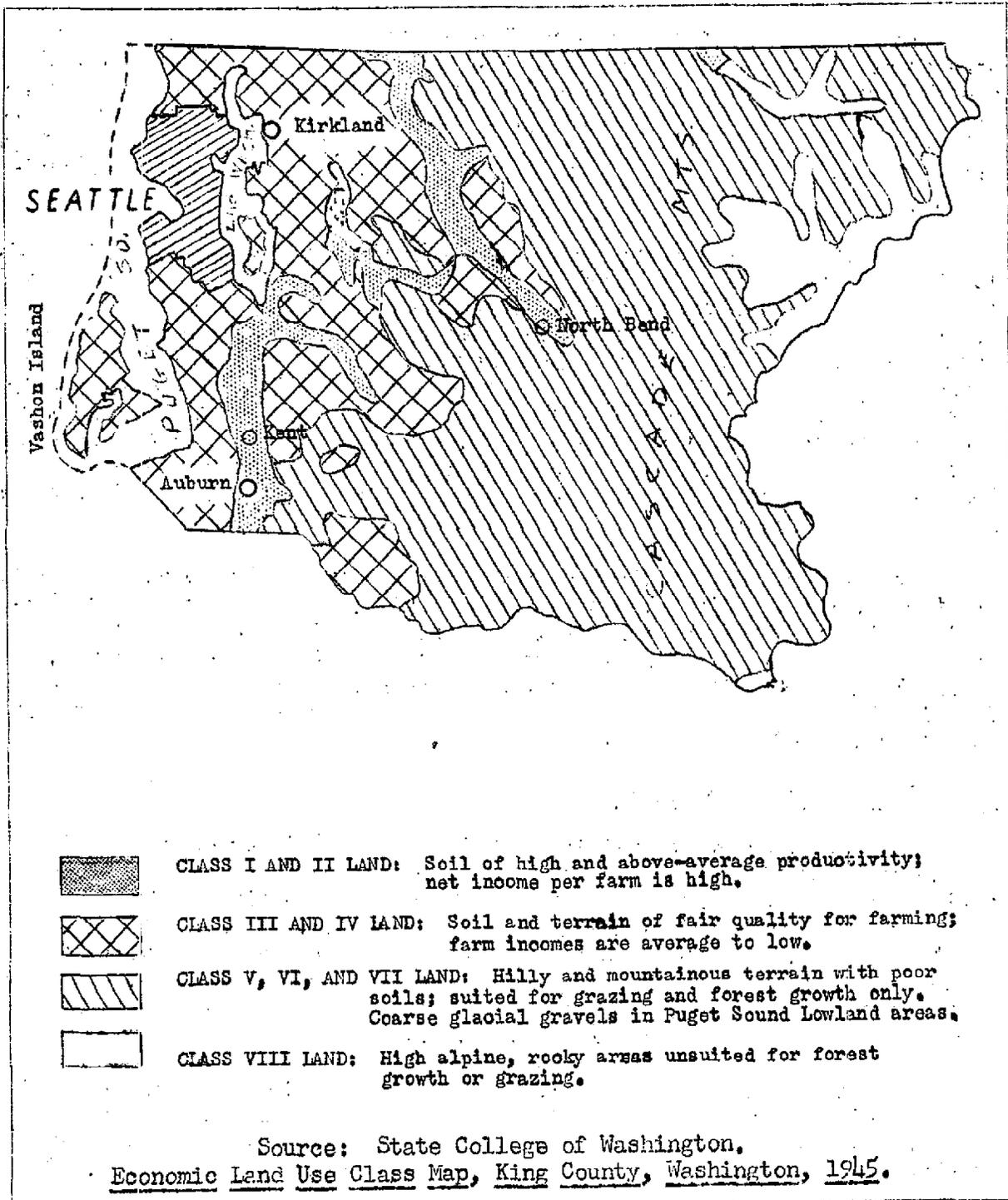


Figure 5.- General Quality of Land For Farming in King County

alluvial, river bottom soils were formed under forests. They are wet in many places and are acid in chemical nature. Leached under heavy rainfall conditions, they are slightly deficient in calcium, phosphorus, and other soluble minerals, but are deep, fine textured and rich in organic matter. When well-drained and improved with lime and other fertilizers they are highly productive. The most easily cultivated lands of the low valleys include several important soils. Puget and Puyallup loams of the silty, clay and sandy loam types are extensive in the Green, White and Snoqualmie Valleys. Formed of more recent river deposits, the Puyallup Series is the most important cultivated soil in the county. Puyallup silty and sandy loams occur in large bodies in the Sammamish Valley. Other soils of stream valleys include the silty, clay and sandy loams of the Sultan, Woodinville, Pilchuck, Edgewick, Nooksack, Snohomish, Issaquah and Sammamish Series. Most of these river bottom soils are in crops and pastures.

Class III and IV land makes up large sections of the glacial drift plains. Numerous types of glacial drift soils cover these gently sloping uplands and the level areas which are old lake and bog basins. These glacial soils are generally gravelly, and hard to till. Top soils are thin and moisture content is low during the summer. Rainfall seeps through the top layers of the soil and the groundwater table is low. These soils have to be sprinkler-irrigated and deeply top-dressed with manures or compost to get fair productivity of grasses or crops. Only a small percentage of the glacial upland soils are cultivated. Most of them are in woodlands, pastures and some berry and poultry farms.

The Alderwood gravelly and sandy loam covers the large upland area between Seattle and Tacoma, between Lake Washington and Lake Sammamish and to the eastward of Kent and Auburn. Everett gravelly and sandy loam is found in a large upland area between the Green and Cedar Rivers. On the level and poorly drained glacial plains around Enumclaw, the Buckley and Enumclaw loams are upland soils which are farmed extensively. Upland drift plains contain many small boggy areas of peat and muck soils which have been drained and improved into productive land. These include Carbondale muck and Greenwood, Mukilteo and Rifle peat. Important upland prairie soils are the Edgewick and Salal loams which support a number of farms on a level plain of the upper Snoqualmie Valley at North Bend. Most of the Salal soils are located in the North Bend district and are classified as class II land. On Vashon Island the glacial soils of the Alderwood, Everett and Indianola Series are quite intensively farmed for strawberries and other specialty crops. Alderwood gravelly and sandy loams of varied degrees of slope cover most of the island.

Over two-thirds of King County is in classes V, VI, VII and VIII, the marginal or poorer lands for agriculture. They include the Cascade Mountain and foothill country where soils are stony, thin and suited best for forest growth. The mountainous area, except for some narrow valley bottoms, is classified as non-agricultural land. The largest part of the Puget Sound Lowland containing the gravelly and steeper pastures of the glacial soils consist of class V lands which are poor for farming. Most of this lower area contains the Alderwood and Everett Soils Series in localities where the slope is quite steep and soil moisture is too deficient for crops or pasture. Much of the class V land, however, is being occupied by suburban residences. Because of its location as residential view property, much of it is as valuable or more valuable in the

real estate market than the class I and II lands in the lower river valleys. Particularly valuable are the class V lands overlooking Puget Sound and on heights between Lakes Washington and Sammamish.

### Climate

King County is located in the West Coast Marine climatic region of North America extending from southeastern Alaska to northern California. Climate here is influenced by the mild, moist air flowing inland from the ocean. Because of mountain barriers and the prevailing inland movement of oceanic air, the climate is cool, cloudy and wet for most of the year. Cold or hot and dry air of the continental interior seldom invades the county because of the Cascade Mountains. The Puget Sound Lowlands have a climate similar to other parts of the world located on the west coasts of continents between the latitudes of 40 to 55 degrees. This includes the British Isles and Northwest Europe, Southern Chile in South America, and also New Zealand. Regions located in this climatic belt are noted for dairy and forest products and crops adapted to cool, moist conditions with long wet seasons and short, summer dry seasons.

Because of the great variation in King County elevations, its temperatures, frost conditions, growing seasons and precipitation vary considerably by locality. Western King County lowlands and Vashon Island are warmer and drier than the eastern mountainous portion. The Cascade area is one of extremely heavy rain and snowfall. Above the 2,000 foot level temperatures are below freezing during winter, and are 5 to 10 degrees cooler than the valley lowlands during the summer season. Heavy snowfall frequently blocks the roads and passes of eastern King County.

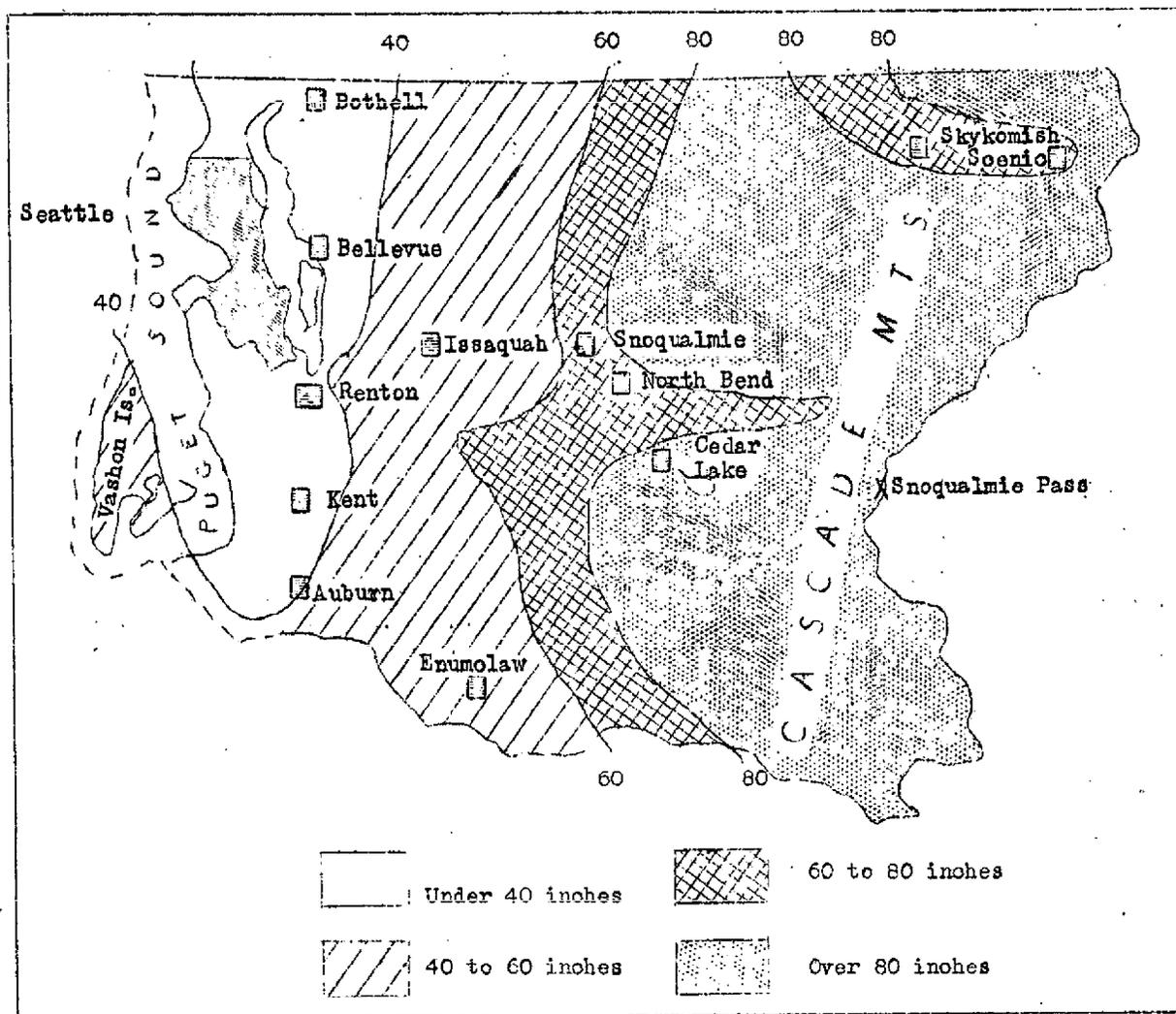
Temperature records over a 30 to 60 year period show that the western lowlands in the Seattle and Kent localities average about 38 to 40 degrees daily in January. Midsummer temperatures in July are a comfortable average of 63 to 65 degrees. Moderate summer averages are caused by the cool nights and some air drainage from the mountains. Sea breezes off Puget Sound also temper the hot periods.

Growing season and freeze conditions vary according to elevation and patterns of air drainage. Killing frosts and severe freezes are not common and

Table 6.- Temperature Extremes, Dates of Killing Frost  
King County

Station and Elevation	Temperature Extremes Recorded (degrees Fahrenheit)		Killing Frost Average Dates	
	Coldest	Hottest	Last in Spring	First in Fall
Cedar Lake (1,560)	0	98	April 9	November 5
Kent (40)	-4	101	April 24	October 14
Landburg (535)	0	101	May 1	October 12
Palmer (895)	4	102	April 17	October 28
Seattle (14)	3	98	March 14	November 24

Source: U.S. Dept. of Agric., Climate and Man,  
1941 Yearbook of Agriculture.



Source: U.S. Department of Agriculture, Climate and Man  
1941 Yearbook of Agriculture

Figure 6.- Distribution of Precipitation  
King County.

Table 7.- Precipitation, King County

Station and Elevation in Feet	Average Monthly Precipitation (in inches)												Annual Total (inches)
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
Cedar Lake (1,560)	14.03	10.35	11	7.4	6.84	4.78	1.90	2.55	5.29	10.13	13.83	15.16	103.3
Kent (40)	5.39	3.66	3.47	2.42	1.73	1.68	.73	.84	1.77	3.71	5.02	5.43	36.59
Soenic (2,224)	10.34	7.74	9.05	4.42	4.36	3.05	1.07	1.12	2.96	7.53	10.23	13.48	75.35
Seattle (14)	4.49	3.74	3.06	1.94	1.61	1.25	.52	.87	1.56	3.08	4.46	5.34	31.92
Vashon Island (231)	6.02	4.54	3.58	2.56	2.03	1.56	.60	.74	2.96	3.62	6.8	7.54	41.62

Source: U.S. Weather Bureau, Climatological  
Data, Washington, Annual Summary 1954.

occur only occasionally in the Green, Snoqualmie and Sammamish Valleys. Heat given off by Puget Sound and Lake Washington waters is generally sufficient to prevent local frosts. Ground fogs often accumulate over the Sound in early spring and autumn and prevent frosts. Inland valley bottoms, lake depressions, and bog areas have frosts earlier and more frequently as heavy, cold air from the uplands and mountains drains into them on calm, clear, spring or autumn nights. Seattle and the Green River Valley generally enjoy a growing season, or frost-free period of about 245 days. Green River Valley farmers usually plan on mid-April as a safe planting date and mid-October as the time of the first killing frost.

Table 8.- Temperatures For Selected Stations, By Months  
King County  
(Source: United States Weather Bureau)

Station and Elevation in Feet	Average Temperatures (in degrees Fahrenheit)												Annual Average
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	
Cedar Lake (1,560)	35.2	44.4	41.1	46.6	52.2	57.2	62.1	62.4	57.6	50.8	51.0	37.7	48.6
Kent (40)	38.6	46.0	45.6	50.4	56.8	50.4	63.8	63.9	51.0	52.0	54.0	41.6	51.2
Landsburg (535)	37.2	43.2	44.0	49.0	53.6	58.6	62.6	62.4	57.3	50.6	49.6	39.2	49.7
Palmer (895)	35.6	44.8	42.9	48.2	53.4	58.2	62.8	62.4	57.6	50.7	53.4	39.1	49.3
Seattle (14)	40.7	46.7	47.0	51.8	57.3	61.8	65.6	65.2	61.0	54.4	55.6	44.7	53.2

Four general precipitation zones are apparent from Weather Bureau data. The driest zone of 32 to 40 inches is the area about Seattle, Lake Washington, Kent and a portion of Vashon Island. An inland belt of low foothills is moderately wet with 40 inches per year. A higher foothill zone receives 60 to 80 inches. The Cascades above 4,000 feet are very wet with 80 to more than 100 inches.

Precipitation is distinctly seasonal throughout the county. A dry season prevails from June to September with only two inches or less of rainfall per month. The dry season favors the harvesting of hay and other crops. On the other hand, a fire hazard is created in the forests and woodlands, during which land clearing, burning, logging and general forest entry are often curtailed. The weather is wet from October to June as westerly winds drop their moisture through rapid cooling in their ascent of the Cascade slopes. Seattle, near sea level, is the driest locality with an annual precipitation averaging about 32 inches. Cedar Lake, a Cascade mountain station of 1,560 feet elevation, is the wettest station with an average of 103 inches.

#### Forests and Wildlife

King County's large forest area has played an important role in agriculture. Abundant timber resources have permitted a continuous source of off-farm work for many farmers in the interior valleys. Nearly everywhere logging operations preceded settlement on farms. They aided in clearing away forest cover and lowered the costs of bringing land under cultivation. Sales of cut-over land by lumber and timber companies enabled many families to start farming in the pioneer period.

For many years King County was one of the major lumber producing areas of the Pacific Coast. In 1925 there were 47 mills located in the county which cut

a total of 835,089,000 board feet of Douglas fir lumber. King was fourth among Washington and Oregon counties in timber cut in that year. Sawmilling decreased to a volume of 458,240,000 feet in 1949, <sup>1/</sup> largely due to depletion of privately-owned accessible timber. This also occurred in neighboring Puget Sound counties.

According to the most recent Forest Service survey in 1942, King County contained a large timber resource in private and federal holdings <sup>2/</sup>. Over 80 percent of the land area, or 1,095,000 acres was classified as forest land. The area of conifer saw timber totaled 342,000 acres. Immature, young regrowth and non-commercial timber in high elevations covered about 753,000 acres of logged-over and burned-over land. Second-growth timber which has grown in the last 30 to 50 years has become important to farmers and other woodland owners. These young woodlands have become valuable as sources of pulpwood, small logs, posts, poles and Christmas trees.

In 1942 the Forest Service estimated that there were about 16,400,000,000 board feet of saw timber remaining in the county. Western hemlock, valuable for pulpwood and lumber, amounted to 6,000,000,000 feet. Pulpwood species-- Pacific Silver Fir, Grand Fir and other Alpine Firs--amounted to 3,300,000,000 feet. Other minor species of commercial value were western red cedar, red alder, bigleaf maple and black cottonwood.

The forest land is about equally divided between public and private ownership. The United States government owns 333,000 acres and about 5,700,000,000 feet of timber in the portion of Snoqualmie National Forest which is located within King County. The State of Washington owns about 72,000 acres. Seattle and Tacoma own 61,000 acres which are managed as watersheds in the upper Cedar and Green River drainages. There are also 32,000 acres owned by the county and a limited amount in Indian land. Private ownership, mainly in the lower lands near Puget Sound, includes about 851,000 acres. Private woodland on farms amounts to a total of 46,500 acres. Lumber, paper, and timber companies, railroads and non-farmers own the largest portion of the forested land. Commercial tree farming for sustained yield of wood is becoming a common type of land management by these forest land owners.

The mountainous and seashore environment supports a variety of wildlife species of considerable value to the county's economy. A trip from Seattle to the top of Mount Daniels is somewhat comparable to a journey from the same city to Point Barrow, Alaska. Climatic changes from temperate to Arctic result in different plants and animals adapted to each zone. Fish, game and fur animal resources supply numerous farm families and rural communities with supplemental income. According to the Washington State Game Department, the marine waters, rivers, lakes, marshes and mountain forests yield an important return to

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<sup>1/</sup> West Coast Lumbermen; Association, Portland, Ore. 1949-1950, Statistical Year Book.

<sup>2/</sup> U.S. Dept. of Agric., Forest Service, Pacific Northwest Forest and Range Experiment Station, Portland, Oregon. Forest Statistics, for King County, Washington. April 1942.

sportsmen <sup>1/</sup>. Sixty-eight lakes and over 75 streams are listed as fair to good for trout and bass fishing. The Snoqualmie and Green Rivers are among the state's first ten steelhead fishing streams, over 8,000 being caught from the Green River in the 1952-53 season. In the woodlands and mountains, over 2,000 deer and about 30 elk were bagged in 1955. Trappers (many of them farm boys) harvested a fur catch in 1955-56 of 3,080 muskrat, 228 mink, 58 marten, 20 otter and 60 raccoon. The county was second in the state in the catch of muskrat and mink.

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<sup>1/</sup> Washington State Game Department, Game Bulletin, January 1954-April 1956, and "Report of Trappers Catch of Fur-Bearing Animals, 1955-56" (mimeographed)