ECONOMIC PROFILE of WASHINGTON STATE

WASHINGTON STATE DEPARTMENT OF COMMERCE AND ECONOMIC DEVELOPMENT

BUSINESS AND ECONOMIC RESEARCH DIVISION

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PEOPLE

In population Washington ranks twenty-third among the states of the nation. It is in land area the fourth smallest state west of the Mississippi, but only five of the other eleven western continental states have more people. The State is the center of the Pacific Northwest region, and with its more than three million people contains over half the tri-state area's combined population.

Washington's population increased a half-million people in each of the two recent decades for gains of 37% in the 1940's and 20% in the 1950's. This growth has occurred principally in the State's urban areas which increased by 29% from 1950 to 1960. Rural area population during the same period grew only 4%. Urban concentrations in 1960 accounted for 68% of the State's population, as compared with 63% in 1950.

(See Attached Map of Population Distribution)

1964 Population	2,984,000
Percent of Increase, 1964/60	4.6%
1960 Population	2,853,214
Percent of Increase, 1960/50	19.9%
Urban (68.1% of Population)	1,943,249
Percent of Increase, 1960/50	29.3%
Rural (31.9% of Population)	909,965
Percent of Increase, 1960/50	3.9%
Number of Households, 1960	894,168
Persons Per Household	3.09
Number, Persons Per Square Mile	42.8

LABOR FORCE

One of Washington State's more valuable resources is its highly skilled and productive labor force. The State's professional, technical and skilled crafts personnel comprise 35% of the labor force, as compared to 31% nationally. These skill levels are a result of an excellent educational system and the development of highly skilled workers by the State's atomic energy, aerospace, shipbuilding, and heavy machinery industries.

Total Civilian Labor Force, 1964	1,134,100
Percent of Change 1964/60	4.1%
Total Civilian Labor Force, 1960	1,089,900
Male	72%
Female	28%

Age Distribution (1960 Census)

14 to 24	202,429	18%
25 to 44	491,474	44%
45 to 65	431,076	38%

Labor Skills (Employed 1960 Census)

Professional & Technical Workers	130,744	15%
Managers, Officials & Proprietors	97,156	11%
Clerical & Kindred Workers	146,180	16%
Craftsmen & Foremen	148,368	17%
Operatives	141,734	16%
Farmers & Farm Managers	29,776	3%
Household & Service Workers	113,188	13%
Laborers	85,343	10%

PERSONAL INCOME

Personal income is the most comprehensive measure of State economic growth and development. By this measure the State has grown 15% from 1960 to 1963 or roughly $1 billion in that three-year span. Reduced to per capita terms for comparison, the State of Washington ranks 12th best in the nation. Per capita income for the State in 1963 was $2,558, some $100 better than the national average of $2,449 per person.

1963 Total Personal Income	$7,575,000,000
Percent Increase, 1963/60	14.8%
1963 Per Capita Personal Income	$2,558
1960 Total Personal Income	$6,597,000,000
1960 Per Capita Personal Income	$2,300

Total Civilian Income Received by Persons for Participation in Current Production, 1963	$5,933,000,000
By Industrial Source:	
Farm	$ 261,000,000
Mining	14,000,000
Contract Construction	396,000,000
Manufacturing	1,599,000,000
Wholesale & Retail Trade	1,192,000,000
Finance, Insurance & Real Estate	311,000,000
Transportation	324,000,000
Communications & Public Utilities	132,000,000
Services	702,000,000
Government	964,000,000
Other	38,000,000

INDUSTRY

While not in completely comparable terms, there are measurements which indicate the relative importance of industries. If we consider all manufacturing as a single unit, it represents the State's greatest primary source of wealth. In 1963, the latest Census year available, value added to the original cost of raw materials by Washington manufacturers totaled $2.9 billion. Within manufacturing based on value added by manufacture, individual industries would be ranked: (1) Transportation Equipment, (2) Lumber and Wood Products, (3) Paper and Kindred Products, (4) Food and Allied Products, and (5) Chemicals and Allied Products.

Second in importance in this over-all count is cash farm receipts which in 1964 amounted to more than $652 million. Washington's total of cash farm receipts raised from $603 million in 1963.

The third most commonly quoted source of wealth-producing activity is the State's travel industry. In offering this as an industrial claim, allowances must be made for the difficulties associated with making industry estimates. On the basis of non-resident travel alone, more than $268 million has been estimated in expenditures. If residents are conveniently assumed to be at least matching non-resident expenditures, travelwise the industry's counts are probably in the neighborhood of some $500-plus million.

Fourth in line is the State's logging activity. In 1964 value of logs was estimated to be more than $359 million. This basic raw material cost is, of course, considerably below that of the total processed value of pulp-paper-lumber-wood products.

Fifth most important is the State's mineral production which in 1964 amounted to more than $77 million.

The sixth most important in these primary sources of State wealth is that represented in the fishing industry. In 1964 the cash value alone of the fish harvest was $22 million.

Manufacturing

Washington employs one-quarter million workers in its manufacturing industries. Payrolls for all these employers in 1963 totaled $1.5 billion. During that year the State's manufacturers produced some $2.9 billion worth of goods over and above the cost of raw materials and supplies. This measure, value added by manufacture, has increased 35% since 1958. Total capital investment by manufacturers is estimated at $3.2 billion with new capital expenditures in 1963 of $130 million.

Manufacturing Establishments, 1963	5,100
Employment, 1963	225,000
Percent of Increase, 1963/58	4.6%
Payroll, 1963	$1,474,000,000
Production Workers	151,000
Production Man Hours, Worked, 1963	298,000,000
Value Added by Manufacture, 1963	$2,922,000,000
Percent of Increase, 1963/58	34.8%
New Capital Expenditures, 1963	$130,000,000
Average Hours Worked Weekly, 1963	39.2
Average Weekly Earnings, 1963	$112.61
Average Hourly Earnings, 1963	$2.87

(See following pages for additional industry detail.)

Agriculture

The State's agricultural industry is one of Washington's major income producers ranking second after manufacturing in the relative importance of industries. Cash farm receipts in 1964 totaled $652 million from the marketing of more than 50 different crops. The diversity of crops produced in Washington results from the State's varied croplands and climatological conditions. Eastern Washington contains the dryland farming area with grain and cattle as the principal crops. Central Washington contains an extensive irrigated area (half-million acres) where fruit and diversified field and vegetable crops are grown. The State's western slopes support the production of such commodities as berries, poultry, and dairy products.

Cash Farm Receipts, 1964	$652,000,000
Percent Increase, 1964/63	8.0%
Cash Farm Receipts, 1963	$603,700,000
Number of Farms	51,575
Land Area in Farms (Acres) .. 44% of State	18,767,405
Average Size of Farms (Acres)	363.9

Land Area in Farms by Use (Acres)	
Cropland Harvested	4,412,217
Land Pastures	10,004,831
Woodland	853,660
Irrigated Lands	1,006,800
Land Unused	2,773,567
Average Value Farm Land & Buildings Per Farm	$44,018
Value of Production by Crop	
Field Crops	$279,229,000
Fruit, Nut & Berry Crops	89,508,000
Vegetable Crops	30,781,000
Livestock & Livestock Products	213,235,000
Specialty Products	33,200,000

Principal Agricultural Products:
Wheat, livestock, apples, barley, sugar beets, hops, pears, potatoes, poultry, peas, cherries, grapes, asparagus, strawberries, beans, peppermint, oats, lentils, peaches, sweet corn, prunes, rye, spearmint, apricots, cranberries, lettuce.

Forest Products

Washington forests cover 24 million acres or 56% of the State's land area. Of this forest area, 82% is in commercial production supplying roughly 4.5 billion board feet of timber annually. Douglas Fir is the more prevalent forest species accounting for 35% of commercial stands and 37% of the timber harvest. In volume Douglas fir is followed by western hemlock, cedars, true firs, and ponderosa pine.

In production values the forest products industry is lead by: pulp, $377 million; lumber, $228 million; paper, $143 million; and plywood, $112 million. These are all a major part of the State's manufacturing activities.

Forest Land Area (Acres)	23,900,000
Commercial Forest Land Area (Acres)	19,490,000

Commercial Sawtimber Stands (Million Board Feet)	315,067
Softwoods	306,796
Douglas fir	109,674
Western hemlock	87,712
Ponderosa pine	19,937
Hardwoods	8,271
Red Alder	5,304

Volume of Timber Cut, 1963 (Million Board Feet)		5,428
Douglas fir	37% of cut	2,001
Western hemlock	33% of cut	1,769
Cedar	8% of cut	453
Ponderosa pine	6% of cut	325
Hardwoods	2% of cut	136

Log Use by Industry in Western States	
Lumber	66%
Plywood	11%
Pulp	23%

Forest Industry Production Values, 1961	$888,700,000
Lumber	228,070,000
Douglas fir region	164,000,000
Ponderosa pine region	64,070,000
Plywood	111,500,000
Shingles & Shakes	16,630,000
Pulp	377,250,000
Paper	143,950,000
Hardboard, particle board	8,050,000
Christmas trees & greens	3,250,000

Minerals

An active growing minerals industry has flourished in Washington since the first mining of coal in the early 1850's. Since that time more than $1.8 billion of minerals production has been recorded. The minerals industry is the State's fifth ranked industry in relative terms. Washington's mineral industry ranks nationally: seventh in lead production, eleventh in zinc production, third in diatomite production, sixth in talc and soapstone production and sixth in uranium production.

Value of Mineral Production, 1964	$76,830,000
Percent Increase 1964/60	9.7%
Value of Mineral Production, 1960	$70,005,000

Mineral Production by Commodity, 1964	
Sand & Gravel	$20,600,000
Stone	16,400,000
Zinc	6,984,000
Lead	1,683,000
Peat	200,000
Clays	117,000
Copper	23,000

Other items whose individual values cannot be disclosed:
Carbon dioxide, cement, diatomite, epsomite, gold, lime, magnesite, olivine, pumice, silver, uranium, and coal $30,806,000

Fisheries

Nationally, Washington ranks 13th in total pounds of fish and shellfish landed and seventh in total value of fisheries production. Over half of the catch value was salmon, followed by halibut and oysters. The fisheries industry ranks sixth in relative importance of State Industries.

Game fish: Chinook and silver salmon, steelhead, rainbow trout, cutthroat trout, and brook trout.

Catch Value to Fishermen, 1963	$21,845,476
Percent of Increase, 1963/60	36.7%
Salmon	11,050,716
Halibut	3,684,538
Bottom Fish (sole, rockfish, halibut, cod)	3,058,544
Oysters	1,779,371
Other shellfish	1,798,479
Other	473,828
Catch Value to Fishermen, 1960	$15,982,236

TRANSPORTATION

Seattle-Tacoma International Airport ranks third in the nation in the number of overseas passengers handled. More flights from Seattle-Tacoma Airport are made to Alaska daily then from all other airports in the United States combined. Washington's strategic location, as the gateway to Alaska and as the closest state to the Orient via the Great Circle Route, has given its air transportation industry a tremendous boost.

Four transcontinental railroads have their Pacific termini in Washington—Northern Pacific, Great Northern, Milwaukee, Union Pacific. A total of six Class A railroads serve the State. Three of these connect in British Columbia with Canadian transcontinental railroads. Over 16 million tons of goods are shipped by rail from Washington locations annually.

Trucks—common, contract, and exempt carriers of all kinds—serve every industry and community in the State.

Washington's water transportation facilities make shipment of bulk products more economical then in other sections of the United States. Foreign, coastwise, and intercoastal shipping companies serve all deep water ports in Washington. Washington ports are more than 250 miles closer to major ports in the Far East, representing a one-day time saving in shipping.

The most extensive system of inland waterways of any state in the nation is found in Washington, thanks to Puget Sound and the Columbia River. The Columbia River, the greatest freshwater inland waterway in the country, other than the Great Lakes-St. Lawrence Waterway, is only beginning to be fully recognized for its potential.

WATERBORNE FREIGHT TRAFFIC THROUGH WASHINGTON PORTS
1963
(Short, Tons)

Port	Total	Foreign Export	Foreign Import
Kalama	700,597	269,822	—
Willapa Harbor	439,064	25,557	2,342
Grays Harbor	2,218,812	252,473	30,969
Hoquiam	864,601	—	—
Neah Bay	165,342	28,380	—
Port Angeles	2,058,521	272,851	107,241
Port Townsend	751,743	9,914	139,080
Port Gamble	219,658	1,050	30
Olympia	850,194	64,894	575
Tacoma	5,944,232	1,265,752	1,307,588
Seattle	13,505,596	1,047,317	952,627
Everett	2,113,900	427,541	245,778
Anacortes	6,563,399	98,551	403,012
Bellingham	1,695,053	197,188	717,136
Longview	3,626,926	1,772,975	109,512
Vancouver	1,941,608	772,335	34,177

COMMERCE & TRADE

Commerce and trade in the Pacific Northwest centers in its most populous state—Washington. Its trades, distribution and banking facilities have all experienced substantial growth as a result of the Northwest's growing population and industrial complex.

Retail Trade..... 1963 Sales Volume..... $4,013 million
1958 Sales Volume..... 3,419 million
Percent Increase 18%

Wholesale Trade.. 1963 Sales Volume..... $5,173 million
1958 Sales Volume..... 4,316 million
Percent Increase 20%

Service Trade.... 1963 Sales Volume....... $540 million
1958 Sales Volume....... 437 million
Percent Increase 24%

Banking

State Banks..... 1963 Total Assets... $1,061 million
1958 Total Assets... 740 million

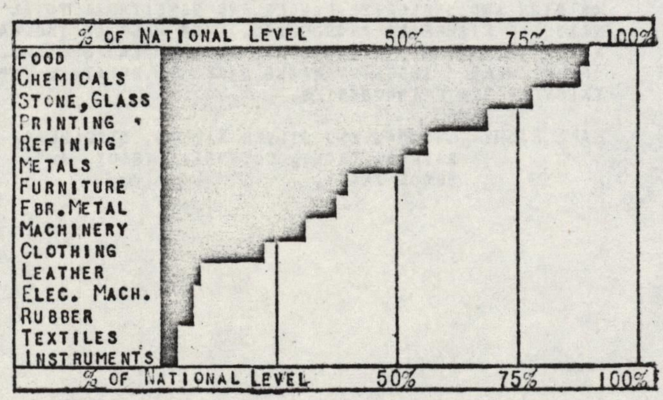
National Banks.. 1963 Total Assets... $3,062 million
1958 Total Assets... 2,548 million

Savings & Loan Associations... 1963 Total Assets..... $462 million
1958 Total Assets..... 257 million

Credit Unions... 1963 Total Assets..... $131 million
1958 Total Assets..... 55 million

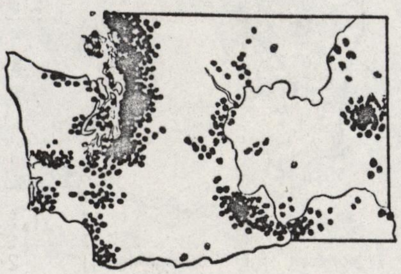
DEVELOPMENT OPPORTUNTIES

Growing industrial markets and consumer needs are presenting opportunities for the production of goods on many scales of manufacture. There are, although, areas which based on national averages would indicate greater than usual opportunity for new Washington production. These industry areas are identified in the adjacent chart. Washington's present employment levels are charted as a percent of what they should be based on national ratios of number of employees per 1,000 population. Production levels are not necessarily directly related to population, but this data could be the basis for further investigation. Perhaps production gaps exist which would permit at least the smallest economical production unit.



Each of the state's nineteen major manufacturing categories is briefly reviewed below. A small map accompanies each review which indicates the location of manufacturing establishments in that industry group. The accompanying table presents both regularly published data as well as estimates by the Washington State Department of Commerce and Economic Development. A detailed review of data sources follows the section.

FOOD AND KINDRED PRODUCTS



Number of Establishments	733
Employment	24,480
Payroll (Thousands)	$135,522
Value Added by Manufacture (Thousands)	$298,498
Percent of Change—1962/58	.2 %
Total Capital Investment (Millions)	$357.0
New Capital Expenditures (Millions)	$23.6
Value Annual Purchases (Millions)	$418.6
Purchases of Manufactured Goods (Millions)	$210.0
Value Annual Sales (Millions)	$732.5
Sales Distribution:	
In-State	59 %
Out-State	41 %

FOOD AND KINDRED PRODUCTS is the state's third largest manufacturing activity accounting for 11 % of the state's manufacturing employment. In dollar terms it ranks fourth, producing some $298 million of goods over and above the cost of raw materials and supplies. The industry's capital investment in the state totals an estimated $357 million with capital expenditures in 1962 exceeding $23 million.

Canned and frozen food processors are the largest single employer group within the food products industry with about one-third of the industry's total employment engaged in this activity. Most of the production of this segment of the industry is for national markets. The food processors of Washington satisfy much of the nation's appetite for crab, salmon, clams, oysters, green peas, pears, apricots, asparagus, strawberries, cherries, cranberries, apples and rhubarb. Another of the smaller agriculture processors nationally significant is the state's grain milling industry. Washington's soft wheats are milled for distribution throughout the nation.

Washington's next ranked manufactured food products—meat, dairy products and bakery goods—are produced principally for state or regional consumption.

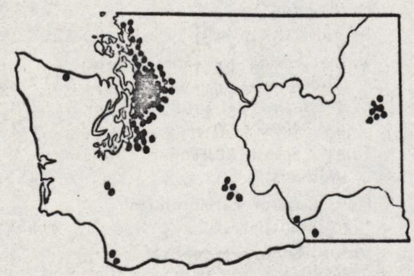
The processing of agricultural products is a natural result of the state's vast agricultural production. In 1962 such production was valued at $660 million increasing from $374 million twenty years ago. A major contributor to this tremendous growth has been the reclamation and development of one-half million acres of arid land in the Columbia River Basin. As the balance of the million acre basin is brought under irrigation from Grand Coulee Dam, continued growth in agricultural production will provide increased raw stocks for processing.

TEXTILE MILL PRODUCTS

Number of Establishments	17
Employment	610
Payroll (Thousands)	$2,378
Value Added by Manufacture (Thousands)	$4,807
Percent of Change—1962/58	14.1 %
Total Capital Investment (Millions)	$5.2
New Capital Expenditures (Millions)	* *
Value Annual Purchases (Millions)	$4.0
Purchases of Manufactured Goods (Millions)	N.A.
Value Annual Sales (Millions)	$11.1
Sales Distribution:	
In-State	70 %
Out-State	30 %

TEXTILE MILL PRODUCTS is one of the state's smaller industries, accounting for .3 % of the total manufacturing employment. This industry class is composed principally of knit outerwear mills, woolen mills, and manufacturers of cordage and twine, paddings and upholstery filling. The products of these manufacturers, with two or three notable exceptions, are for local or regional consumption. These exceptions produce knit wear for national distribution or produce cloth for converting into sports and quality clothing for sale nationally.

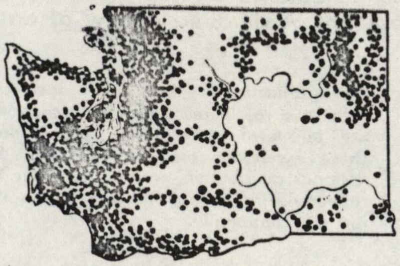
APPAREL AND RELATED PRODUCTS



Number of Establishments	121
Employment	4,721
Payroll (Thousands)	$17,351
Value Added by Manufacture (Thousands)	$26,013
Percent of Change—1962/58	44.7 %
Total Capital Investment (Millions)	$20.0
New Capital Expenditures (Millions)	$.7
Value Annual Purchases (Millions)	$64.9
Purchases of Manufactured Goods (Millions)	$30.0
Value Annual Sales (Millions)	$83.1
Sales Distribution:	
In-State	36 %
Out-State	64 %

APPAREL AND RELATED PRODUCTS ranks tenth among the state's nineteen manufacturing industries. It accounts for 2 % of total manufacturing employment. The industry's production value totals $26 million in excess of its material and supply cost. The state's industry, far removed from the nation's textile centers, was founded on the local market for work clothing. From this beginning, the state's apparel fabricators are now recognized nationally for distinctively styled men's and women's sportswear, jackets, ski clothing and women's blouses with their trademarks well known throughout the nation. Production of the other segments of the industry—draperies, canvas goods, raingear, work clothes—is directed to regional consumption.

LUMBER AND WOOD PRODUCTS



Number of Establishments	1,920
Employment	39,106
Payroll (Thousands)	$204,384
Value Added by Manufacture (Thousands)	$317,689
Percent of Change—1962/58	8.2%
Total Capital Investment (Millions)	$453.4
New Capital Expenditures (Millions)	$33.2
Value Annual Purchases (Millions)	$311.6
Purchases of Manufactured Goods (Millions)	$150.0
Value Annual Sales (Millions)	$633.9
Sales Distribution:	
In-State	44%
Out-State	56%

LUMBER AND WOOD PRODUCTS is the state's second largest manufacturing activity. It accounts for 17% of the total manufacturing employment. Its production in 1962 was valued at $318 million in excess of costs of raw materials and supplies. The industry's new capital outlay in 1962 totaled $33 million.

It is natural that Washington should have developed an extensive forest products industry, since one-sixth of the nation's standing sawtimber is located in the state. This amounts to an impressive 315 billion board feet of sawtimber from which Washington harvests lumber and wood products and distributes to the population centers of the nation. These products of the state's forests move eastward by rail and water to supply the building needs of the nation.

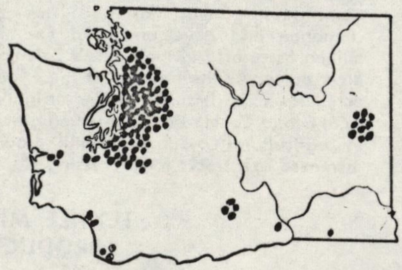
The basic activity of the lumber and wood products industry is the harvesting or logging of trees. Roughly one-quarter of the industry's 40,000 employees are engaged in this phase of the industry harvesting an annual output of 5 billion board feet.

The secondary processing in sawmills and planing mills employs another 17,000 persons. Washington's lumber production ranks third among the states of the nation with almost 10% of the national total. Its production comes from nearly 700 sawmills ranging in size from two of the largest integrated mills in the world to small portable mills.

The manufacture of plywood is another secondary log processing activity of major importance in the lumbering industry employing some 9,000 persons. The state's plywood mills produce one-fifth of the nation's total supply.

The balance of lumber and wood products activity is in millwork, containers, shakes and shingles, pallets and other miscellaneous wood products.

FURNITURE AND FIXTURES



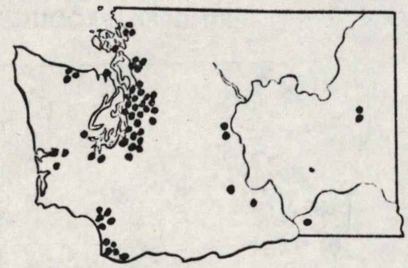
Number of Establishments	128
Employment	2,404
Payroll (Thousands)	$11,860
Value Added by Manufacture (Thousands)	$17,491
Percent of Change—1962/58	—16.4
Total Capital Investment (Millions)	$16.6
New Capital Expenditures (Millions)	$.8
Value Annual Purchases (Millions)	$50.6
Purchases of Manufactured Goods (Millions)	$10.0
Value Annual Sales (Millions)	$117.0
Sales Distribution:	
In-State	52%
Out-State	48%

FURNITURE AND FIXTURES ranks twelfth among the state's nineteen manufacturing industries. It accounts for 1% of manufacturing employment. The industry's production value totaled $17 million in 1962 after costs of raw materials. New capital expenditures reached $.8 million in the same year.

The state's furniture industry consists mainly of manufacturers of wood household furniture. This segment accounts for 42% of total furniture manufacturing employment. Other smaller but important industry segments manufacture cabinets, mattresses, bedsprings, church and school furniture, and upholstered wood furniture.

The production of this industry is principally for consumption within the Pacific Region, although many manufacturers serve both national and export markets. It is estimated that half of this production is sold outside the state.

PAPER AND ALLIED PRODUCTS



Number of Establishments	66
Employment	17,546
Payroll (Thousands)	$111,715
Value Added by Manufacture (Thousands)	$305,225
Percent of Change—1962/58	21.2%
Total Capital Investment (Millions)	$297.0
New Capital Expenditures (Millions)	$64.5
Value Annual Purchases (Millions)	INSF.
Purchases of Manufactured Goods (Millions)	$270.0
Value Annual Sales (Millions)	INSF.
Sales Distribution:	
In-State	60%
Out-State	40%

PAPER AND ALLIED PRODUCTS is ranked fourth among the state's nineteen manufacturing industries. It accounts for 7% of total manufacturing employment. In 1962 the industry's production was valued at $305 million in excess of raw material costs. New capital expenditures were over $64 million in 1962.

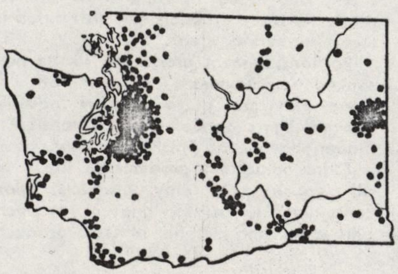
The pulp and paper industry is the second largest of the state's forest industries complex — lumber and wood products, furniture and fixtures, and paper and allied products. Its prominence although is not limited to the confines of the state. In the last decade Washington mills have produced between 11% and 12% of the national wood pulp output and from 4% to 5% of the nation's paper and paperboard production. The output of the state's papermills include tissues, towels, napkins, specialty papers, wax and glassine papers, printing papers, converting papers and paperboards.

The other segments of this industry are paper and paperboard converters. Their most important items of production are bags, envelopes, folding boxes, set-up boxes, corrugated shipping containers and sanitary food containers.

Much of this production goes to serve the region's food processors.

The overall production of this industry—pulp, paper and paperboard—is mainly for the Pacific Coast region. The sales distribution indicated in the data box above is somewhat biased because of sales for converting within the state.

PRINTING AND PUBLISHING



Number of Establishments	489
Employment	10,201
Payroll (Thousands)	$56,455
Value Added by Manufacture (Thousands)	$101,463
Percent of Change—1962/58	40.4 %
Total Capital Investment (Millions)	$90.5
New Capital Expenditures (Millions)	$3.1
Value Annual Purchases (Millions)	$28.5
Purchases of Manufactured Goods (Millions)	$40.0
Value Annual Sales (Millions)	$98.4
Sales Distribution:	
In-State	88 %
Out-State	12 %

PRINTING AND PUBLISHING ranks sixth among the state's nineteen manufacturers. It accounts for 4 % of total manufacturing employment. The industry's production value in 1962 was $101 million after costs of raw materials. Its capital investment is estimated at $90.5 million with new capital expenditures exceeding $3 million in 1962.

The state's printing establishments range in size from small newspaper plants with one or two men to large commercial plants with several hundred men. The newspapers of the state are the largest single employer group with 54 % of total industry employment. This, of course, represents only the newspaper plants' primary activity, as most of these establishments also provide commercial printing services. In addition to the state's 160 some daily and weekly newspapers, the printing industry turns out catalogs, business forms, directories, maps, bank checks, diplomas, books, magazines and a host of other advertising, promotional and educational matter. The industry's markets are principally in local areas within the state. Notable exceptions which find markets outside the state are educational diplomas, periodicals, regional directories and guides, books, and maps.

CHEMICALS AND ALLIED PRODUCTS

Number of Establishments	136
Employment	10,505
Payroll (Thousands)	$85,105
Value Added by Manufacture (Thousands)	$223,373
Percent of Change—1962/58	28.4 %
Total Capital Investment (Millions)	$266.9
New Capital Expenditures (Millions)	$4.7
Value Annual Purchases (Millions)	$127.9
Purchases of Manufactured Goods (Millions)	$120.0
Value Annual Sales (Millions)	$156.6
Sales Distribution:	
In-State	58 %
Out-State	42 %

CHEMICAL AND ALLIED PRODUCTS is the state's fifth largest manufacturing employer. It accounts for 4 % of total manufacturing employment. The industry's value added by manufacture in excess of material costs was $223 million in 1962. Total capital investment in the state's chemical industry is estimated at $267 million with new capital expenditures in 1962 of $5 million.

The forest products and agricultural industries form the base from which the state's chemical industry has developed. The first large plants were established to serve the pulp, paper, and plywood industry. More recent additions are fertilizers, insecticides, and fungicides for the state's agricultural operations.

Basic organic and inorganic chemicals compose 87 % of the state's chemical manufacturing employment. The basic chemicals segment assumes this relative importance because of the Atomic Energy Commission plant at Hanford which produces Plutonium and Neptunium-nuclear fuels. Disregarding the AEC employment, the chemicals industries would be ranked: (1) Paints and Varnishes, (2) Explosives, (3) Glues, (4) Plastics Materials, (5) Industrial Gases, (6) Agricultural Chemicals. This production is distributed principally in the Northwest region.

PETROLEUM REFINING AND RELATED INDUSTRIES

Numbers of Establishments	23
Employment	1,399
Payroll (Thousands)	$10,131
Value Added by Manufacture (Thousands)	$60,905
Percent of Change—1962/58	82.6 %
Total Capital Investment (Millions)	$117.2
New Capital Expenditures (Million)	$1.9
Value Annual Purchases (Millions)	INSF.
Purchases of Manufactured Goods (Millions)	$130.0
Value Annual Sales (Millions)	INSF.
Sales Distribution:	
In-State	77 %
Out-State	23 %

PETROLEUM AND COAL PRODUCTS rank fourteenth in employment among the state's nineteen manufacturing industries. This industry employs .6 % of total manufacturing employment. Estimates place the industry's capital investment at $117 million with new capital expenditures approaching $2 million in 1962.

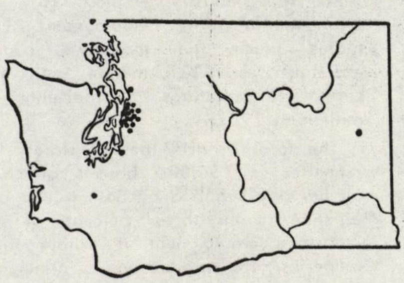
The total capacity of the state's five refineries is 156,000 barrels of crude oil per day supplied by both tanker and pipeline. Eighty-three percent of the industry's employment is within these refineries. The production is principally for distribution within the state and ranges from jet fuels to fuel oils. Asphalt and tar products and lubricating oils are other products of the overall industry.

RUBBER AND MISCELLANEOUS PLASTICS PRODUCTS

Number of Establishments	37
Employment	500 est.
Payroll (Thousands)	$2,900 est.
Value Added by Manufacture (Thousands)	N.A.
Percent of Change—1962/58	N.A.
Total Capital Investment (Millions)	N.A.
New Capital Expenditures (Millions)	N.A.
Value Annual Purchases (Millions)	$3.8
Purchases of Manufactured Goods (Millions)	N.A.
Value Annual Sales (Millions)	$14.0
Sales Distribution:	
In-State	16%
Out-State	84%

RUBBER AND MISCELLANEOUS PLASTICS PRODUCTS is another of the state's smaller industries with an estimated .2% of the state's total manufacturing employment. This industrial group is composed principally of manufacturers of molded and fabricated plastic products consisting of pipe, hose, molded parts, foamed plastic items, laminated decorative sheets, plastic containers and many other fabricated items. The rubber products of this industry are tread rubber, mats and treads, and printing rollers.

LEATHER AND LEATHER PRODUCTS

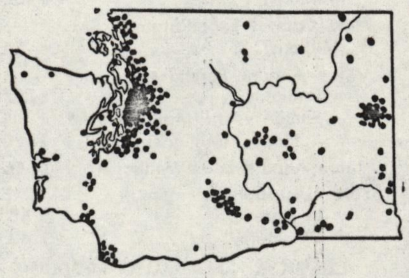


Number of Establishments	21
Employment	300 est.
Payroll (Thousands)	$1,000 est.
Value Added by Manufacture (Thousands)	N.A.
Percent of Change—1962/58	N.A.
Total Capital Investment (Millions)	N.A.
New Capital Expenditures (Millions)	N.A.
Value Annual Purchases (Millions)	$1.9
Purchases of Manufactured Goods (Millions)	N.A.
Value Annual Sales (Millions)	$4.1
Sales Distribution:	
In-State	11%
Out-State	89%

LEATHER AND LEATHER PRODUCTS is the smallest of the state's nineteen manufacturing industries with .1% of the total manufacturing employment. The principal activity within this industry is the manufacture of luggage, bags and cases. One of the nation's largest luggage manufacturer produces luggage in the state for distribution in both national and export markets.

The other smaller industry activities are the manufacture of shoes, other footwear, gloves and handbags.

STONE, CLAY, AND GLASS PRODUCTS



Number of Establishments	240
Employment	5,200 est.
Payroll (Thousands)	$34,300 est.
Value Added by Manufacture (Thousands)	$53,228*
Percent of Change—1960/58	26.3%
Total Capital Investment (Millions)	$74.8
New Capital Expenditures (Millions)	N.A.
Value Annual Purchases (Millions)	$27.1
Purchases of Manufactured Goods (Millions)	$80.0
Value Annual Sales (Millions)	$88.8
Sales Distribution:	
In-State	85%
Out-State	15%

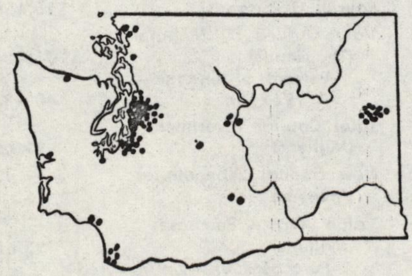
STONE, CLAY AND GLASS PRODUCTS is the state's tenth-ranked manufacturer. It accounts for 2% of total manufacturing employment. The 1958 value of the industry's production totaled $53 million in excess of raw material costs. Total capital investment by the industry approaches $75 million.

The principal segment of the stone, clay and glass products industry in employment terms is the concrete products industry, accounting for 69% of the entire industry. This segment produces ready-mix concrete, concrete brick and block, and other miscellaneous concrete products. These products are distributed in local marketing areas.

Portland cement production is the next ranked employment segment of the stone, clay and glass products industry. The industry's annual capacity totals 7.2 million barrels of finished cement.

Other important products of the overall industry are clay products, glass containers, abrasives, gypsum products, and other non-metallic mineral products.

PRIMARY METAL INDUSTRIES



Number of Establishments	75
Employment	9,292
Payroll (Thousands)	$67,165
Value Added by Manufacture (Thousands)	$180,853
Percent of Change—1962/58	5.1%
Total Capital Investment (Millions)	$214.5
New Capital Expenditures (Millions)	$5.1
Value Annual Purchases (Millions)	$98.4
Purchases of Manufactured Goods (Millions)	$50.0
Value Annual Sales (Millions)	$151.9
Sales Distribution:	
In-State	62%
Out-State	38%

PRIMAY METAL PRODUCTS ranks seventh among the state's nineteen manufacturing industries. It represents 4% of all manufacturing employment. The industry's total capital investment in the state is estimated at $214 million with 1962 new capital expenditures of $5 million.

Three-quarters of this industry's employment is involved in the reduction and processing of aluminum. The nation's major aluminum producers are represented in Washington with a combined annual capacity of 483 thousand tons of primary aluminum or 23% of the nation's smelting capacity. These operations, in addition to smelting, include extensive facilities to convert the metal into wire, cable, sheet, and other extrusions.

The steel industry also is represented in the state and next to aluminum is the primary metals industry's second largest employer. The annual production is 401 thousand tons of steel which is based mainly on the processing of iron and steel scrap. The items produced are principally for the region's construction industry.

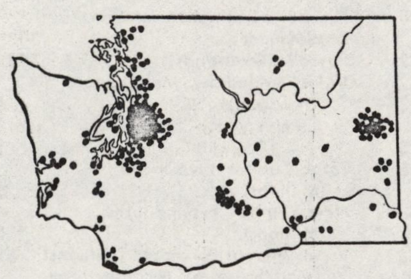
The two electro-ferrous metals producers in this state also are part of this industry segment. Their establishment in the state, as with the aluminum industry, was based on the availability of large quantities of hydroelectric power. The balance of the primary metals industry is engaged in ferrous and nonferrous foundry work and the smelting of gold, copper, silver, etc.

FABRICATED METAL PRODUCTS

Number of Establishments 294
Employment 6,520
Payroll (Thousands) $41,220
Value Added by Manufacture
(Thousands) $74,060
Percent of Change—
1962/58 . . . . 13.7%
Total Capital Investment
(Millions) $68.0
New Capital Expenditures
(Millions) $1.6
Value Annual Purchases
(Millions) $65.8
Purchases of Manufactured
Goods (Millions) $70.0
Value Annual Sales (Millions) . . $149.4
Sales Distribution:
In-State 61%
Out-State 39%

FABRICATED METAL PRODUCTS is the state's eighth largest manufacturing employer. This industry accounts for 3% of total manufacturing employment. Capital investment totals $68 million in the industry with new capital expenditures of $1.6 million in 1962. Fabrication of structural metal products is the principal activity in the fabricated metal products industry. Structural steel for buildings, bridges, ships, towers, metal doors and sash, steel plate products, and sheet metal work all make up the structural metal products industry which represents 62% of the total fabricated metals industry employment. Metal can production, supplying the region's food products industry, is the industry's second largest activity. Hand and edge tools, hardware, metal plating, wire products, metal drums, springs, valves and other miscellaneous fabricated products constitute the remaining production of the fabricated metal products industry.

MACHINERY, EXCEPT ELECTRICAL



Number of Establishments 321
Employment . . . . 6,100 est.
Payroll (Thousands . . . . . . $41,900 est.
Value Added by Manufacture
(Thousands) $52,829*
Percent of Change—
1962/58 . . . . N.A.
Total Capital Investment
(Millions) $122.6
New Capital Expenditures
(Millions) . . . . N.A.
Value Annual Purchases (Millions) . $65.1
Purchase of Manufactured
Goods (Millions) $40.0
Value Annual Sales (Millions) . . $131.2
Sales Distribution:
In-State 33%
Out-State 67%

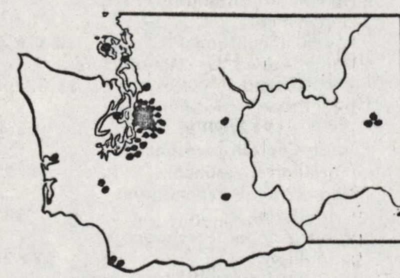
MACHINERY, EXCEPT ELECTRICAL, ranks ninth in employment among the state's nineteen major manufacturing industries. This industry accounts for 3% of the total manufacturing employment. Total capital investment in the industry is estimated at $123 million.

Two segments—logging and construction machinery and special industry machinery—within the overall machinery industry dominate with 56% of the machinery industry's total employment. The special industry machinery segment includes equipment for food products, woodworking, and paper industries. The third ranked segment of the machinery industry is machine shops. This group is mainly a custom service type function.

Other products of the overall industry are metalworking tools, elevators, conveyors, cranes, hoists, materials handling equipment, and service industry equipment.

The industry's production is used principally by Pacific Northwest basic industries. Other national and foreign markets have developed because of the manufacturers' specialization in food and forest products machinery.

ELECTRICAL MACHINERY, EQUIPMENT AND SUPPLIES

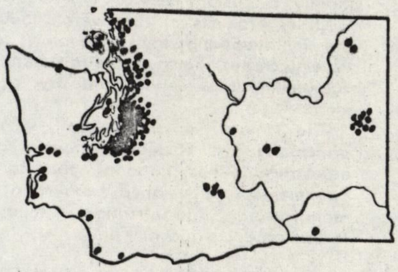


Number of Establishments 61
Employment . . . . 2,600 est.
Payroll (Thousands) . . . . . $16,100 est.
Value Added by Manufacture
(Thousands) $12,240*
Percent of Change—
1962/58 . . . . N.A.
Total Capital Investment
(Millions) $27.2
New Capital Expenditures
(Millions) . . . . N.A.
Value Annual Purchases
(Millions) . . . . INSF.
Purchases of Manufactured
Goods (Millions) $10.0
Value Annual Sales (Millions) . . . . INSF.
Sales Distribution:
In-State 25%
Out-State 75%

ELECTRICAL MACHINERY, EQUIPMENT AND SUPPLIES is the state's fifteenth ranked industry with 1% of total manufacturing employment. The industry has experienced exceptional growth expanding between 1956 and 1962 at a rate of 63%. The industry's production value in 1958 totaled $12 million in excess of its raw material costs. Current capital investment is estimated at $27 million.

The state's electrical machinery industry is oriented primarily towards military and industrial customers. Three-quarters of the industry's production is sold outside the state with the Federal Government either directly or indirectly the main user. Production for regional consumer production includes household heating equipment, fans, and lighting fixtures.

TRANSPORTATION EQUIPMENT



Number of Establishments	179
Employment	84,697
Payroll (Thousands)	$626,428
Value Added by Manufacture (Thousands)	$1,023,441
Percent of Change—1962/58	63.4 %
Total Capital Investment (Millions)	$725.0
New Capital Expenditures (Millions)	$33.2
Value Annual Purchases (Millions)	$2,621.3
Purchases of Manufactured Goods (Millions)	$600.0
Value Annual Sales (Millions)	$4,251.6
Sales Distribution:	
In-State	25 %
Out-State	75 %

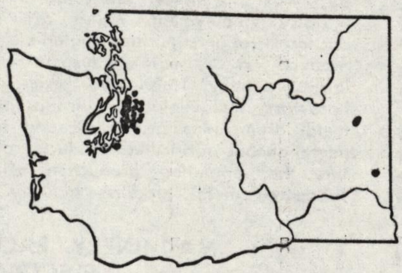
TRANSPORTATION EQUIPMENT is the state's largest industry employing 37 % of total manufacturing employment. In value terms, its production totaled $1 billion in 1962 over costs of raw materials and supplies. Capital investment is estimated at $725 million with new capital expenditures of $33 million in 1962.

The production of aircraft and aircraft parts is the industry's largest single component accounting for 87 % of total employment in transportation equipment. This manufacture includes missiles, missile engines and other space vehicle components and is world famous for its jet transports and military aircraft.

Shipbuilding is of importance in the Puget Sound area engaging some 5,000 people and producing fishing vessels, barges and naval craft.

Other major products manufactured in the state are truck trailers, highway and off-highway truck tractors, track vehicles, railroad cars, trailer coaches and motor vehicle parts.

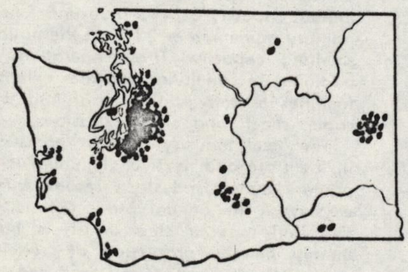
INSTRUMENTS AND RELATED PRODUCTS



Number of Establishments	27
Employment	300 est.
Payroll (Thousands)	$1,700 est.
Value Added by Manufacture (Thousands)	N.A.
Percent of Change—1962/58	N.A.
Total Capital Investment (Millions)	$6.4
New Capital Expenditures (Millions)	N.A.
Value Annual Purchases (Millions)	$12.4
Purchases of Manufactured Goods (Millions)	N.A.
Value Annual Sales (Millions)	$20.3
Sales Distribution:	
In-State	58 %
Out-State	42 %

PROFESSIONAL, SCIENTIFIC, AND CONTROLLING INSTRUMENTS is the second smallest of the state's manufacturing industries with .1 % of total manufacturing employment. Roughly one-third of the industry's employment is engaged in the production of ophthalmic goods. The balance of the industry produces engineering and scientific instruments, mechanical measuring instruments, temperature controls, and surgical, orthopedic and dental equipment. The sales of these products are principally for regional consumption.

MISCELLANEOUS MANUFACTURERS



Number of Establishments	177
Employment	1,856
Payroll (Thousands)	$8,806
Value Added by Manufacture (Thousands)	$12,973
Percent of Change—1962/58	—2.1 %
Total Capital Investment (Millions)	$22.7
New Capital Expenditures (Millions)	* *
Value Annual Purchases (Millions)	$12.8
Purchases of Manufactured Goods (Millions)	N.A.
Value Annual Sales (Millions)	$27.3
Sales Distrbution:	
In-State	68 %
Out-State	32 %

MISCELLANEOUS MANUFACTURING INDUSTRIES AND ORDNANCE EQUIPMENT combined place thirteenth among the state's nineteen industrial categories. These industries account for .8 % of total manufacturing employment. The combined production value totaled $13 million in 1962 in excess of raw material costs while capital investment is estimated at $23 million.

Sign and advertising display makers are the largest employers in this group accounting for one-third of the industries' employment. Other products of this class are silverware, sporting goods, games, ballpoint pens, jewelry, caskets, brooms, furs, and matches.

DATA SOURCES

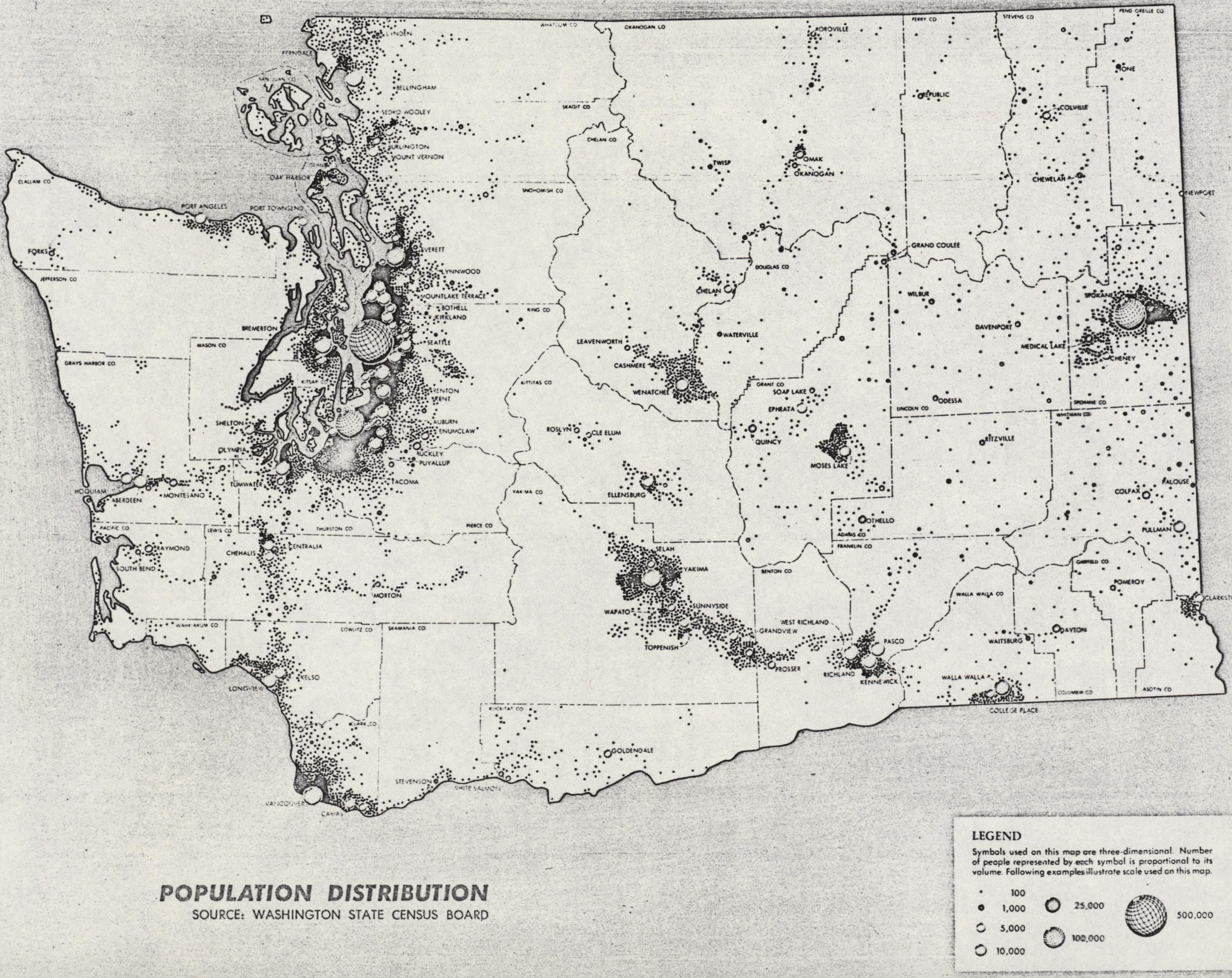
NUMBER OF ESTABLISHMENTS—1958 Census of Manufactures, Bureau of the Census, U. S. Department of Commerce. **EMPLOYMENT, PAYROLL, VALUE ADDED BY MANUFACTURER*, NEW CAPITAL EXPENDITURES**—1962 Survey of Manufactures, Bureau of The Census, U. S. Department of Commerce. **TOTAL CAPITAL INVESTMENT**—calculated from national averages of capital invested per production worker as reported in **Road Maps of Industry,** No. 1474, March 27, 1964, National Industrial Conference Board, Inc. multiplied by the number of Washington production workers from 1962 Survey of Manufactures. **VALUE ANNUAL PURCHASES, VALUE ANNUAL SALES, SALES DISTRIBUTION**—calculated from a 1962 survey of the state's manufactures by the Washington State Department of Commerce and Economic Development. These figures vary in degree of reliability between industries because of individual industry mix, number of industry responses, and completeness of responses. The summation of **value added by manufacture** and **value annual purchases** should approach the **value of annual sales.** This simple check serves as an indication of reliability. **PURCHASES OF MANUFACTURED GOODS** has been calculated from a distribution of purchases by manufacturing industries as determined from 1947 U. S. Interindustry Study by the U. S. Bureau of Labor Statistics multiplied by an estimated 1961 value of Washington manufacturers' shipments.

* 1958 data from 1958 Census of Manufacture, Bureau of The Census, U. S. Department of Commerce

** Less than one-half million dollars

NA Not available

INSF. Insufficient data



POPULATION DISTRIBUTION

SOURCE: WASHINGTON STATE CENSUS BOARD