

WORKING PAPER NO. 23

COLUMBIA RIVER BASIN PROJECT
For Water Supply and Water Quality Management

LANE COUNTY (OREGON)
PRELIMINARY ECONOMIC RECONNAISSANCE
AND ESTIMATE OF GROWTH, 1960-2010

DATE: June 13, 1962

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This working paper contains preliminary data and information primarily intended for internal use by the Columbia River Basin Project staff and cooperating agencies. The material presented in this paper has not been fully evaluated and should not be considered as final.

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June, 1962

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INTRODUCTION

Purpose of This Analysis

This analysis is intended to provide a preliminary estimate of the economic potentials and anticipated growth of the subject area.

Definition of Area

The Willamette River Basin divides conveniently into three parts: (1) the Lower Portion, comprising the Portland Metropolitan Area (Clackamas, Multnomah, and Washington Counties); (2) the Middle Portion, comprising Benton, Linn, Marion, Polk, and Yamhill Counties; and (3) the Upper Portion, comprising Lane County. This report is an analysis of the economy of Lane County; the other two portions of the Willamette River Basin will be examined in subsequent reports.

Physically, the western part of Lane County (containing 6 percent of county population) is outside the Willamette River Basin, draining directly into the ocean. However, because basic statistics and other economic studies are available on a county basis, Lane County as a whole is used here as the unit of study for the economy of the Upper Willamette Basin.

Study Period

The study period is the 50-year period 1960-2010, with an interim point at 1980.

Limitations of This Analysis

Two limitations apply to this study. The first is that it is intended only as a preliminary estimate of the outlook for the subject area's growth. Subsequently, in connection with the Columbia River Basin Project for Water Supply and Water Quality Management, an analysis will be made on an industry-by-industry basis of the growth potential in the various sub-basins. At that time, this preliminary estimate will be reviewed, and revised if necessary.

The second limitation is that this study is intended for use particularly in assessing future water needs. Emphasis has been placed on the analysis of those industries which make heavy demands upon the water resource. Other industries have been considered only insofar as they may have a significant effect on future population. For this reason, this study is not submitted as a detailed industrial forecast.

PRESENT ECONOMIC BASE

Population

Total population in Lane County, as of April 1960, was 162,890.

Table I shows how this population was distributed among the cities of the county in 1960, and also the comparable figures for 1950. The Eugene-Springfield "Urban Area" constituted 60 percent of total county population in 1960, up from 57 percent in 1950. The Eugene-Springfield "Urban Area" includes not only those two cities, but also the built-up, but as yet unincorporated, areas surrounding them. The 1950 figure

for the "Urban Area" is an estimate of the population within the same boundaries used for the 1960 definition. The Eugene-Springfield "Urban Area" grew at about 3.3 percent per year during the 1950-60 period, somewhat above the county average. The rest of the incorporated places, with the exception of Florence, grew at 1 or 2 percent per year, below the county average. The population of Florence grew more rapidly. How much of the population growth of the cities was due to annexations, rather than natural increase or in-migration, is not shown by census data.

Table I
POPULATION OF LANE COUNTY AND ITS INCORPORATED AREAS, 1950 and 1960

<u>City or Area</u>	<u>1950</u>	<u>1960</u>	<u>1960 as % of 1950</u>
Lane County, Total	125,776	162,890	130
Eugene-Springfield "Urban Area" ^{a/}	72,000 ^{b/}	99,361	138
Eugene, city	35,879	50,977	142
Springfield, city	10,807	19,616	182
Unincorporated portion of "Urban Area"	25,000 ^{b/}	28,768	115
Coburg, city	693	754	109
Cottage Grove, city	3,536	3,895	110
Creswell, city	662	760	115
Florence, city	1,026	1,642	160
Junction City, city	1,475	1,614	109
Lowell, city	500 ^{c/}	503	<u>c/</u>
Oakridge, city	1,562	1,973	126
"Rural" portions of county ^{d/}	44,322	52,388	118

a/ The Eugene-Springfield "Urban Area" is defined as the total area within the boundaries of the following 1960 Census County Divisions: Bailey Hill, Bethel, Eugene, Goshen, Norckenzie, River Road, Springfield, and Willakenzie.

b/ The boundaries of the precincts used as census units in 1950 do not coincide with the boundaries of the 1960 Census County Divisions. The 1950 population in the comparable 1960 areas has been estimated from USGS maps.

c/ Lowell was not incorporated in 1950 and no accurate figure is available. Its population at the time of incorporation, in 1954, was 581. However, growth is believed to have occurred between 1950 and 1954; and an estimate for 1950 population is 500.

d/ The "rural" portion includes small, unincorporated communities and some suburban development, so that the increase in "rural" population should not be interpreted to indicate an increase in agricultural population. In fact, total agricultural employment in the county declined substantially during the decade, as shown in Table III.

The population of the part of Lane County outside the Willamette Basin, and the distribution of the Willamette Basin portion among its various sub-basins, are shown in Table II. The Eugene-Springfield "Urban Area,"

which is defined in footnote "a" of Table I, has not been allocated to any sub-basin. The rest of the county has been divided among six sub-basins, on the basis of contour lines on USGS maps. The dividing lines between sub-basins in the relatively heavily-populated valley areas along the "main stem" of the Willamette River are not precise. This, together with the fact that the population in many areas has had to be estimated from USGS maps, since the 1960 census divisions and 1950 precincts do not coincide with basin boundaries, means that the figures in Table II can only be regarded as rough estimates.

Table II
LANE COUNTY POPULATION, BY SUB-BASIN, 1950 AND 1960

<u>Sub-Basin</u>	<u>Estimated Population, thousands</u>		<u>Distribution of Population, per cent</u>	
	<u>1950</u>	<u>1960</u>	<u>1950</u>	<u>1960</u>
Eugene-Springfield "Urban Area"	72.4	99.4	58	61
Coast Fork, Willamette River	13.0	14.5	10	9
Long Tom River	7.9	10.5	6	6
Main stem of Willamette below "Urban Area"	7.8	11.5	6	7
McKenzie River	6.5	6.5	5	4
Middle Fork, Willamette River	9.6	11.0	8	7
Total in Willamette River Basin	117.2	153.4	93	94
Siuslaw and other coastal	8.6	9.5	7	6
Total, Lane County	125.8	162.9	100	100

Industry

The economy of Lane County is heavily dependent upon lumber and wood products manufacturing, which accounted for 80 percent of all manufacturing employment in 1960. This was down from about 86 percent in

1950, however, so that some diversification in manufacturing activity occurred during the 1950-60 decade. During the decade, there was also a substantial increase in service industry employment, particularly in education. The University of Oregon is, after lumber and wood products manufacturing, the second most important factor in the economic base of the county. Table III shows employment by industry in the county as of 1950 and 1960.

Table III
EMPLOYMENT, BY INDUSTRY, LANE COUNTY, 1950 AND 1960

<u>Industry</u>	<u>Employment, in thousands</u>			<u>1960 as % of 1950 ^{a/}</u>
	<u>1950</u>	<u>1960</u>	<u>Change, 1950-60</u>	
Agriculture	3.6	2.1	-1.5	59
Forestry, Fishing & Mining	.4	.5	+0.1	121
Manufacturing, Total	13.1	16.8	+3.7	128
Lumber, wood products	11.4	13.5	+2.1	119
Food and kindred	.6	1.2	+0.6	193
Printing and publishing	.4	.8	+0.4	190
All other manufacturing	.7	1.3	+0.6	187
Construction	3.7	4.0	+0.3	106
R.R. Transportation	1.9	1.7	-0.2	92
Education, public	2.3	4.4	+2.1	195
All other services	19.8	27.0	+7.2	136
Industry not reported	.5	1.0	+0.5	184
Employed Civilian Labor Force	45.3	57.5	+12.2	127

a/ Based on unrounded figures

An indication of the type and degree of specialization in Lane County can be drawn from a comparison of the distribution of employment there with the distribution in the Portland Region as a whole. This is shown in Table IV. In addition to Lane County's specialization in lumber and wood products and in education, as already mentioned, the county's

employment in railroad transportation is well above the proportion for the Region. This is due to the location at Eugene of Southern Pacific shops and other facilities. These three industries--lumber and wood products manufacturing, education, and railroad transportation--are the principal elements in the economic base of Lane County. Most of the rest of the county's employment represents service-type activity undertaken to supply the needs of the local population.

Table IV
LABOR FORCE DISTRIBUTION, LANE COUNTY AND PORTLAND REGION, APRIL 1960
(Per cent of total labor force)

<u>Industry</u>	<u>Lane County</u>	<u>Portland Region</u> ^{a/}
Agriculture	3.4	6.6
Forestry, Fishing & Mining	.9	.8
Manufacturing, Total	<u>27.4</u>	<u>22.8</u>
Lumber, Wood Products	22.0	11.1
Food and kindred	2.0	2.6
Printing and publishing	1.3	1.3
All other manufacturing	<u>2.1</u>	<u>7.8</u>
Construction	6.5	5.9
R.R. Transportation	2.8	1.8
Education, public	7.2	4.9
All other services	44.0	48.0
Industry not reported	<u>1.6</u>	<u>2.4</u>
Employed civilian labor force, Total	93.8	93.2
Unemployed	6.0	6.0
Military	<u>.2</u>	<u>.8</u>
Total Labor Force	100.0	100.0

a/ The Portland Region includes all of Oregon plus five counties in southwestern Washington.

The fact that service industry employment in Lane County is lower than in the Regional average is largely due to the fact that the Portland Metropolitan Area performs some service functions, such as in wholesaling and finance, for the rest of the Region.

ESTIMATED FUTURE GROWTH

Factors Influencing Future Growth

An estimate of future industrial growth in Lane County was made in 1961 by the Bureau of Municipal Research^{1/} and, for purposes of this preliminary study, the findings of the Bureau's report have been accepted as general guidelines. The Bureau's report anticipates a moderate increase during the period from 1960 to 1980-85 in the timber resources available in Lane County, due to a slightly higher allowable cut in National Forest lands and to intensified forest management. This would permit a 10 or 15 percent increase in lumber and wood products employment by 1980-85, as well as establishment of an additional pulp or paper mill in Lane County. There is now one mill in the county, a "kraft" mill of 400 tons-per-day capacity operated at Springfield by the Weyerhaeuser Company. A study made in 1958 by Sandwell and Company of potential pulp and paper development in the Upper Willamette Valley^{2/} also anticipates establishment of one additional mill, of at least 300 tons per day initial capacity, but with possibilities of expansion later. For purposes of this preliminary survey, it is assumed here that pulp and paper capacity in Lane County might be about 800 tons per day by 1980 and 1,500 tons per day by 2010.

1/ Employment Forecast, An Estimate of Lane County Employment for 1980-85, Bureau of Municipal Research, University of Oregon, 1961.

2/ Upper Willamette Valley Pulp and Paper Development Study, by Sandwell and Co., for Oregon State Department of Planning and Development, March 1958.

In addition to the increase in timber-based production, the Bureau of Municipal Research's study also forecast the following growth factors for Lane County from the present to 1980-85: an increase of about 40 percent in agricultural production, despite a continued decline in agricultural employment; a doubling of enrollment at the University of Oregon; and beneficial effects from the development of the Port of Siuslaw, at Florence.

Future Employment and Population

On the basis of the factors noted in the previous paragraph, a preliminary estimate of future employment and population in Lane County is shown in Table V. The estimates for 2010 have been made on the assumption that basic trends during 1960-80 will continue. The figures in Table V, particularly those for 2010, should not be regarded as forecasts, but rather as illustrative estimates of values which the assumed growth rates and relationships would yield.

Table V
PRELIMINARY ESTIMATE OF LANE COUNTY EMPLOYMENT AND POPULATION, 1980 AND 2010
(Estimated employment and population to nearest thousand)

<u>Industry</u>	<u>1960</u>	<u>1980</u>	<u>2010</u>
Agriculture, forestry, fisheries, mining	2.6	2.4	2.2
Manufacturing, Total	<u>16.8</u>	<u>21.6</u>	<u>31.8</u>
Lumber, wood products, furniture and fix.	13.5	15.7	17.2
Pulp and paper	.3	1.0	1.7
Food and kindred	1.2	1.7	2.9
All other	<u>1.8</u>	<u>3.2</u>	<u>9.0</u>
GOODS, TOTAL	19.4	24.0	33.0
CONSTRUCTION AND ALL SERVICES, TOTAL	38.1	60.0	109.0
TOTAL EMPLOYED CIVILIAN LABOR FORCE	57.5	84.0	142.0
Construction + Services as multiple of Goods	2.0	2.5	3.3
Population as multiple of employment	2.8	2.8	2.8
Population, Lane County	163.0	235.0	400.0

In Table V, in the first group shown, it has been assumed that agricultural employment would continue to decline, but that this would be partially offset by increased employment in forestry, fisheries, and mining. Lumber and wood products employment growth after 1980 would depend upon further developments of secondary manufacturing of wood products and possibly some increase in harvest resulting from improved tree farm management. Pulp and paper employment would include increased fabrication of pulp into finished paper products. Food and kindred includes products for the local market and so will tend to increase with population. In addition, agricultural production is expected to continue to increase, despite declining farm labor, thus providing further raw materials for food processing. The growth assumed for "all other manufacturing" is a continuation of the diversification which occurred during 1950-60, which is expected to accelerate as local population increases to the point where it can provide a market for local production of goods formerly imported.

The population estimates for 1980 and 2010, derived in Table V from estimated future employment, are consistent with rates of growth that would result from the Series II population projection for Oregon, made by the U. S. Census Bureau.^{1/} The Series II (migration assumption no. 2) projection for Oregon is 2,783,000 in 1980 and 4,156,000 in 2000. If that growth curve is extended, the projected 2010 population is 4,919,000. A preliminary distribution of these state totals among the

^{1/} Population Projections and Economic Assumption, Kerr Committee on National Water Resources, Committee Print No. 5, page 29.

various sub-regions of the state yields estimates for Lane County approximately the same as those shown in Table V.

The distribution of estimated future population among the various sub-basins of Lane County is difficult to predict because basin boundaries in the densely populated central area around Eugene are not locational barriers. Plants might locate at one of numerous potential sites, within a few miles of each other and yet lying in different sub-basins. Estimates of future population distribution can only be made arbitrarily on the basis of broad considerations. It is likely that the Eugene-Springfield "Urban Area" will constitute an increasing proportion of total county population, continuing the 1950-60 trend. Development of the port of Siuslaw could cause the population of that sub-basin to increase more rapidly, halting the declining trend in that sub-basin's share of county population shown for the 1950-60 decade. The sub-basin identified as the "Main stem of the Willamette below the Urban Area" is likely to maintain its share of county population, because of its central location. It appears reasonable to assume that the Coast Fork and Middle Fork of the Willamette and the McKenzie Basins will continue to decline as a percentage of total county population, as they did during 1950-60. On the basis of these assumptions, Table VI shows an illustrative distribution of estimated future Lane County population among the various sub-basins. Table VI assumes that there will be no abrupt break with trends of the past decade.

Table VI
ILLUSTRATIVE DISTRIBUTION OF LANE COUNTY POPULATION BY SUB-BASIN, 1980 AND 2010

<u>Sub-Basin</u>	Population, thousands			Distribution, per cent		
	<u>1960</u>	<u>1980</u>	<u>2010</u>	<u>1960</u>	<u>1980</u>	<u>2010</u>
Eugene-Springfield "Urban Area"	99.4	150	267	61	64	67
Coast Fork, Willamette River	14.5	19	28	9	8	7
Long Tom River	10.5	14	20	6	6	5
Main stem of Willamette below "Urban Area"	11.5	16	27	7	7	7
McKenzie River	6.5	7	10	4	3	2
Middle Fork, Willamette River	11.0	14	20	7	6	5
Total in Willamette River Basin	153.4	220	372	94	94	93
Siuslaw and other coastal	9.5	15	28	6	6	7
Total, Lane County	162.9	235	400	100	100	100

For design purposes, hypothetical figures for future population of the cities in Lane County can be extrapolated, though it should be emphasized that such estimates are even more arbitrary than estimates for sub-basins. The economies of these cities are so small and often so specialized that the location of one new plant or the loss of one existing plant could have a pronounced effect on their population. The figures for future city populations, shown in Table VII, are based largely on extrapolations of the past trend in average annual rate of growth and the past trend in each city's share of the population of the sub-basin in which it is located. That is, the figures for cities, in Table VII, are derived partially from the estimates for sub-basins shown in Table VI. In addition to the extrapolation of these trends, certain general considerations influenced the estimates for future city populations. Among these considerations are the following:

All of the sub-basins, except the Siuslaw and coastal area, radiate out from the Eugene-Springfield "Urban Area," so that a considerable part of the unincorporated population in each of these sub-basins is close-in suburban development. This is likely to continue to be true in the future, and explains the relatively large unincorporated population in the sub-basins.

It is assumed that Coburg, a satellite suburb of Eugene, will increase more rapidly in the future than it has in the past, as the Urban Area grows.

Cities located along the main lines of north-south communication, particularly Cottage Grove and to a lesser extent Junction City, will derive some stimulus from that fact.

Some expansion of lumber and wood products employment in the county is expected, and part of this can locate at Oakridge.

It is assumed that the smaller cities, Lowell and Creswell, will grow about in proportion with their sub-basins.

Florence is expected to grow as a result of development of the port of Siuslaw and seaside recreation.

Table VII
ILLUSTRATIVE ESTIMATES OF FUTURE POPULATION OF CITIES IN LANE COUNTY, 1980-2010
(Population to nearest thousand)

<u>City</u>	<u>1960</u>	<u>1980</u>	<u>2010</u>
Eugene-Springfield Urban Area	99.4	150	267
Coburg	.8	1.3	2.4
Cottage Grove	3.9	5.5	9.1
Creswell	.8	1.1	1.7
Florence	1.6	3.4	7.8
Junction City	1.6	2.2	3.8
Lowell	.5	.7	1.0
Oakridge	2.0	2.8	4.0