Where People Live

In Map 11, color connotes the density of human residency as of the 1990 federal census. Population is tabulated on the basis of where people sleep, not where they work, and density is expressed as the number of people per unit area, in this case square miles. The actual values reported here, how-ever, are influenced by the manner in which the U.S. Bureau of the Census tabulates people, a system that has evolved in parallel with increasing population, urbanization, and data processing technology. A hierarchy of spatial reporting units is employed such that counties are divided into tracts comprised of groups of blocks. 1990 marked the first decennial census for which the block unit, originally defined to mean a city block, was extended to non-urban locales. Population is tabulated at the block level and density is computed based on the area of each block. The 1990 census was also the first for which the boundaries of the census reporting units were available for the entire nation in digital form (Map 11).

Some of the census blocks in urban areas are extremely small and yield very high densities, the highest in the Willamette Valley data being just under one million persons per square mile for a block of roughly 2637 ft² (245 m²) in the city of Portland. Other characteristics of the data must also be kept in mind when interpreting or applying them. Some blocks, both urban and rural, have a reported population of zero, either because they are bodies of water,

are forests, or in spite of being densely occupied during the day, are not locations of dwellings. A substantial number of such zero population blocks can be found in urban cores and present the user with choices concerning the meaning of the data. Should these empty blocks be averaged with the others in order to present a more accurate view of population density, or should they be left out, and only data from non-zero blocks be used? Most of us derive our impression of the density of urban areas during the times when most of us are simultaneously present there — during the day. Yet the census blocks for these locations may report low density which accords poorly with our commonsense view of city life.

Occupied census blocks vary in size between 172 ft² (16 m²) and 288 million ft² (26.5 million m²), and between zero and 4720 persons per block. Reported densities within the Willamette Valley range from zero to 919,809 persons per square mile. The colored horizontal bar graph in Fig. 76 below shows the percentage of the study area in each of the density ranges, the units being persons per square mile. Photographs are representative of census blocks in the study area having the indicated densities. The photographs below, taken in 1997, depict 1990 census blocks within density categories that increase by a factor of ten from left to right, corresponding to the density levels in the bar chart at the bottom of the page (Fig. 77).

10	43			576	4142	17,063	
Persons per square mile							
0			1 - 10		1 - 100	101 - 1000	
130%		180%		200%	$\pi \sim 8\% 3\%$		
	45%				29%	8% 3%	
			Perce	nt Area			
City Name	1990 Density	1990 Population	1995 Population	% change 1990-199	5 % State pop. in city	% Study are	ea pop. in city
Gladstone	3941	10152	11475	13	0.36%	0.52%	
Milwaukie	3823	18670	20015	7.2	0.66%	0.95%	
Beaverton	3801	53307	61720	15.8	1.88%	2.72%	
Portland	3567	438802	497600	13.4	15.44%	22.40%	
Corvallis	3442	44757	47485	6.1	1.57%	2.28%	
Springfield	3292	44664	49005	9.7	1.57%	2.28%	
Philomath	3178	2983	3315	11.1	0.10%	0.15%	
Woodburn	3148	13404	15475	15.5	0.47%	0.68%	
Newberg	3065	13086	15285	16.8	0.46%	0.67%	
Eugene	2986	112733	121905	8.1	3.97%	5.75%	
Lake Oswego	2957	30576	33145	8.4	1.08%	1.56%	
Keizer	2944	21884	26320	20.3	0.77%	1.12%	
Silverton	2899	5630	6405	13.7	0.20%	0.29%	
Junction City	2768	3692	4090	10.8	0.13%	0.19%	
Cottage Grove	2532	7403	7745	4.6	0.26%	0.38%	
Salem	2479	107793	118355	9.8	3.79%	5.50%	
Lebanon	2310	10950	11780	7.6	0.39%	0.56%	
Oak Ridge	2260	3063	3175	3.7	0.11%	0.16%	
Albany	2054	22540	36205	22.6	0.79%	1.15%	
McMinnville	2000	17894	22140	23.7	0.63%	0.91%	
Willamina	1849	1748	1775	1.5	0.06%	0.09%	
Wilsonville	1035	7106	9765	37.4	0.25%	0.36%	
Lowell	654	785	955	21.7	0.03%	0.04%	
Detroit	364	331	365	10.3	0.01%	0.02%	

Figure 76. 1990 population density for selected sites in the WRB. Values were computed by averaging block-level densities within city limits. Density units are persons per square mile. See also Figure 122, page 106 for clarification of population densities relative to housing densities.



Figure 77. Percentage of WRB land area in each of six population density ranges. Green bars indicate the percentage of Willamette River Basin population living in each of the density ranges.

HUMAN POPULATION

