

BUDS Explanation

The Buxton Urban Density System (BUDS) is a measure of population density that describes the differences among highly rural areas and highly urban areas. BUDS accounts for the population and employee density decay that occurs when moving further from an urban center by examining population per square foot.

BUDS is assigned at the block group level, the lowest level of the geographic hierarchy for which the Census Bureau tabulates. Block groups are a subdivision of a census tract generally containing between 600 and 3,000 people with an optimum size of 1,500 people and totals 208,632 distinct block groups. After analyzing the average population/employee density for all of the block groups in five mile rings, the block groups are then divided up into five classifications based on average population and employee density. Thresholds for these five categories are determined by calculating the average population/employee density within these five-mile rings. Adjustments were made to these classifications based on a ten-mile radius to ensure that each block group was in the correct category.

The five BUDS classifications and their average five-mile population and employee densities are as follows:

<i>BUDS</i>	<i>Definition</i>	<i>Average Population Density at Five Miles</i>	<i>Average Employee Density at Five Miles</i>
1	Rural	15,703	375
2	In-Town	73,385	1,291
3	Suburban/Small City	150,963	1,954
4	Metropolitan	324,778	3,013
5	High-Rise Living/Urban	1,141,223	7,705

Additionally, the chart below further illustrates the five BUDS groups by comparing percentages of population to land area.

<i>BUDS</i>	<i>Definition</i>	<i>Population</i>	<i>Land Area (in square miles)</i>	<i>Population per Square Mile</i>	<i>Population Percent of U.S.</i>	<i>Land Percent of U.S.</i>
1	Rural	47,749,280	2,989,702	1.6	16%	89.2%
2	In-Town	42,720,350	226,375	188.7	15%	6.8%
3	Suburban	126,442,413	122,771	1,029.9	43%	3.7%
4	Metropolitan	55,446,058	12,265	4,520.7	19%	0.4%
5	Urban	12,176,327	1,307	9,316.2	7%	0.0%
U.S. Total		292,934,571	3,352,421			

This chart illustrates how population density decreases from Urban to Rural areas. For example, Urban areas command a miniscule amount of land space but contain 7% of the U.S. residential/employee population. By contrast, 3.7% of the United States' land area is Suburban, but it contains 43% of the residential/employee population. Additionally, 89.2% of the United States' land area is Rural, but Rural areas only contain 16% of the residential population.