

Healthy Aging in Oregon Counties

# **PHYSICAL ENVIRONMENT**

Data by Area Agency on Aging

2009

## About Street Connectivity

Street connectivity is defined as “a system of streets with multiple routes and connections serving the same origins and destinations. Connectivity not only relates to the number of intersections along a segment of street, but how an entire area is connected by the system. An area with high connectivity has multiple points of access around its perimeter as well as a dense system of parallel routes and cross-connections within the area. Typically, parallel routes are classified and sized appropriately for local traffic to discourage longer distance through traffic” (p. 3).

Traditional grid-patterned neighborhoods have higher street connectivity and are friendlier to pedestrians and bicyclists. The high connectivity of these neighborhoods facilitates alternative transportation and leads to higher levels of physical activity. However, typical suburban developments begin with cul-de-sacs and progress to major arterials, with low levels of connectivity. The cul-de-sac pattern of neighborhoods typically “results in large intersections at major junctions, greater congestion along major streets and an environment that discourages pedestrian and bicycle travel” (p. 3).

Connectivity is commonly measured by two terms: gamma and alpha. Gamma represents the ratio of actual number of street segments to maximum possible, with higher numbers representing areas with more gridded street patterns and lower numbers representing areas with more cul-de-sacs. Alpha represents the ratio of the actual number of complete loops to the maximum number of possible loops, with higher numbers representing a higher level of complexity and connectivity. This can be used to evaluate the number of alternative routes to travel from one location to another. More routes to get to from location to another means that it is easier to walk through a neighborhood and reach destinations of interest.

**In general, areas with higher gamma and alpha ratios indicate areas with more street connectivity that tend to be friendlier for pedestrians and bicycles.**

## Reference

Metro (2004). *Street connectivity: An evaluation of case studies in the Portland region*. Retrieved December 9, 2008 from <http://www.oregonmetro.gov/files/planning/connectivityreport.pdf>.

## Street Connectivity

Table 40: Number of Street Segments and Intersections, data from Rand Center for Population Health and Health Disparities<sup>3</sup>, by Area Agency on Aging, Oregon, 2000

Region	Counties	Number of Street Segments	Number of Intersections	Gamma <sup>1</sup> (%)	Gamma Range	Alpha <sup>2</sup> (%)	Alpha Range
Oregon		537,173	442,870	40	34-62	11	1-43
Central Oregon Council on Aging	Crook, Deschutes, Jefferson	41,398	32,596	42	39-49	14	8-24
Clackamas County Social Services	Clackamas	28,111	24,075	39	35-53	8	2-30
Community Action Program East Central Oregon	Morrow, Umatilla	25,300	24,075	41	38-47	12	7-21
Community Action Team – Area Agency on Aging	Columbia	7,273	6,282	39	36-44	8	4-16
Community Connection of Northeast Oregon	Baker, Grant, Union, Wallowa	3,698	30,906	41	39-52	11	9-28
Douglas County Seniors and People with Disabilities	Douglas	22,456	19,677	38	36-46	7	4-18
Harney County Senior and Community Services	Harney	15,338	11,960	43	42-43	14	14-15
Klamath Basin Senior Citizens Council	Klamath, Lake	50,247	37,742	44	39-53	17	8-29
Lane COG Seniors and People with Disabilities	Lane	38,090	33,024	38	35-60	8	3-39
Malheur Council on Aging and Community Services	Malheur	13,660	10,716	43	39-49	14	7-24
Mid-Columbia COG - Senior and Disabled Services	Gilliam, Hood River, Sherman, Wasco, Wheeler	17,395	14,322	40	37-49	11	5-23
Multnomah Aging and Disability Services	Multnomah	41,071	29,246	46	36-62	20	4-43
Northwest Senior and Disability Services	Clatsop, Marion, Polk, Tillamook, Yamhill	63,280	53,439	39	36-56	9	4-33
Oregon Cascades West COG Seniors and People with Disabilities	Benton, Lincoln, Linn	43,838	37,687	39	35-57	8	3-35
Rogue Valley COG - Senior and Disabled Services	Jackson, Josephine	41,231	36,734	37	34-54	6	1-31
South Coast Business Employment Corp.	Coos, Curry	25,853	22,970	38	35-50	6	2-25
Washington County Disabled, Aging and Veterans Services	Washington	24,934	20,987	40	36-48	9	3-22

<sup>1</sup> Gamma = ratio of actual number of street segments to maximum possible.

<sup>2</sup> Alpha = ratio of the actual number of complete loops to the maximum number of possible loops.

<sup>3</sup> This research used data from the RAND Center for Population Health and Health Disparities, which is funded by grant 1-P50-ES012383 from the National Institute of Environmental Health Sciences. For further information on the CPHHD, go to <http://www.rand.org/health/centers/pophealth/index.html>.

## Fast Food Availability

Table 41: Number of Fast Food Restaurants, data from InfoUSA, by Area Agency on Aging, Oregon

Region	Counties	Number of Fast Food Restaurants	Density (Number per 100,000 population)
Oregon		1,280	35
Central Oregon Council on Aging	Crook, Deschutes, Jefferson	63	35
Clackamas County Social Services	Clackamas	126	35
Community Action Program East Central Oregon	Morrow, Umatilla	24	29
Community Action Team – Area Agency on Aging	Columbia	12	26
Community Connection of Northeast Oregon	Baker, Grant, Union, Wallowa	16	29
Douglas County Seniors and People with Disabilities	Douglas	44	43
Harney County Senior and Community Services	Harney	3	42
Klamath Basin Senior Citizens Council	Klamath, Lake	21	29
Lane COG Seniors and People with Disabilities	Lane	125	37
Malheur Council on Aging and Community Services	Malheur	16	49
Mid-Columbia COG - Senior and Disabled Services	Gilliam, Hood River, Sherman, Wasco, Wheeler	19	38
Multnomah Aging and Disability Services	Multnomah	243	35
Northwest Senior and Disability Services	Clatsop, Marion, Polk, Tillamook, Yamhill	184	35
Oregon Cascades West COG Seniors and People with Disabilities	Benton, Lincoln, Linn	88	38
Rogue Valley COG - Senior and Disabled Services	Jackson, Josephine	91	33
South Coast Business Employment Corp.	Coos, Curry	26	31
Washington County Disabled, Aging and Veterans Services	Washington	179	37

Fast food restaurants were those that fit the following characteristics: national chains; expedited food service; takeout options; limited or no wait staff; facilities on site to consume food; full meal options offered on the menu; and payment tendered prior to receiving food.

The following restaurants were included: A&W, Arby's, Arctic Circle, Baja Fresh, Big Town Hero, Blimpies, Burger King, Burgerville, Carl's Jr., Chipotle, Dairy Queen, Del Taco, El Pollo Loco, Jack in the Box, KFC, McDonald's, Muchas Gracias, Panda Express, Pita Pit, Popeye's, Qdoba, Quiznos, Sbarro, Schlotzsky's, Sonic, Subway, Taco Bell, Taco Del Mar, Taco Time, Togo's, and Wendy's.

## Grocery Store Availability

Table 42: Number of Grocery Stores, data from InfoUSA, by Area Agency on Aging, Oregon

Region	Counties	Number of Grocery Stores	Density (Number per 100,000 population)
Oregon		1,096	30
Central Oregon Council on Aging	Crook, Deschutes, Jefferson	41	23
Clackamas County Social Services	Clackamas	86	24
Community Action Program East Central Oregon	Morrow, Umatilla	23	27
Community Action Team – Area Agency on Aging	Columbia	17	37
Community Connection of Northeast Oregon	Baker, Grant, Union, Wallowa	26	46
Douglas County Seniors and People with Disabilities	Douglas	45	44
Harney County Senior and Community Services	Harney	2	28
Klamath Basin Senior Citizens Council	Klamath, Lake	35	48
Lane COG Seniors and People with Disabilities	Lane	110	33
Malheur Council on Aging and Community Services	Malheur	10	31
Mid-Columbia COG - Senior and Disabled Services	Gilliam, Hood River, Sherman, Wasco, Wheeler	30	61
Multnomah Aging and Disability Services	Multnomah	229	33
Northwest Senior and Disability Services	Clatsop, Marion, Polk, Tillamook, Yamhill	141	27
Oregon Cascades West COG Seniors and People with Disabilities	Benton, Lincoln, Linn	79	34
Rogue Valley COG - Senior and Disabled Services	Jackson, Josephine	84	31
South Coast Business Employment Corp.	Coos, Curry	42	50
Washington County Disabled, Aging and Veterans Services	Washington	96	20

Grocery stores were those establishments that had a primary Standard Industrial Classification code for a Retail Grocer (5411). Retail grocers include supermarkets, food stores, and grocery stores, primarily engaged in the retail sale of all sorts of canned goods and dry goods, fresh fruits and vegetables, and fresh and prepared meats, fish, and poultry (does not include convenience stores).

## Farmers' Market and Farm Stand Availability

Table 43: Number of Farmers' Markets and Roadside/Farm Stands participating in the 2008 Oregon Farm Direct Nutrition Program, data from Oregon Department of Agriculture, by Area Agency on Aging, Oregon

Region	Counties	Number of Farmers' Markets and Farm Stands
Oregon		291
Central Oregon Council on Aging	Crook, Deschutes, Jefferson	8
Clackamas County Social Services	Clackamas	23
Community Action Program East Central Oregon	Morrow, Umatilla	13
Community Action Team – Area Agency on Aging	Columbia	2
Community Connection of Northeast Oregon	Baker, Grant, Union, Wallowa	15
Douglas County Seniors and People with Disabilities	Douglas	12
Harney County Senior and Community Services	Harney	0
Klamath Basin Senior Citizens Council	Klamath, Lake	4
Lane COG Seniors and People with Disabilities	Lane	24
Malheur Council on Aging and Community Services	Malheur	2
Mid-Columbia COG - Senior and Disabled Services	Gilliam, Hood River, Sherman, Wasco, Wheeler	10
Multnomah Aging and Disability Services	Multnomah	32
Northwest Senior and Disability Services	Clatsop, Marion, Polk, Tillamook, Yamhill	56
Oregon Cascades West COG Seniors and People with Disabilities	Benton, Lincoln, Linn	38
Rogue Valley COG - Senior and Disabled Services	Jackson, Josephine	16
South Coast Business Employment Corp.	Coos, Curry	9
Washington County Disabled, Aging and Veterans Services	Washington	27