



Percent of Residential Population Within 500m of a Park Entrance

This EnviroAtlas community map estimates the percent of the total population in each census block group that resides within 500 meters of a park entrance.

Why is proximity to parks important?

Parks increase the livability of urban areas and often improve aesthetics within communities. Parks come in many forms, including large forested parks and recreational fields. People often recreate in parks, which provides opportunities to socialize with others, participate in physical activity, and engage with nature. In urban areas, parks provide much-needed [green space](#) and are often highly visited.

People prefer to spend time outdoors in green rather than barren areas because they are more aesthetically pleasing and often more hospitable on hot days. Those who live closer to parks may visit them more often and increase their time spent in physical activity. This outcome positively affects health by increasing physical fitness, reducing depression and anxiety, and improving cognitive function, among other benefits. People who frequent parks and other green spaces close to their homes can have increased social ties and they are more likely to participate in neighborly activities. Access to parkland within walking distance of a child's home has been shown to reduce the risk of obesity. Spending time in parks has also been shown to increase recovery from stress and help maintain overall health.

Thus, those who live closer to parks may be more likely to receive the multiple benefits associated with this proximity. Because parks as green spaces often contain a significant number of trees, these health benefits could potentially extend beyond those gained from recreation and aesthetics to include air filtration and heat mitigation.



How can I use this information?

The map, Percent of Residential Population within 500m of a Park Entrance, can be used to identify neighborhoods that have ready access to parks and those that are underserved that may benefit from additional parks or new park entrances to increase access. The summaries by census block group can be used to evaluate park access per capita. When overlaid with these maps, socio-economic layers within EnviroAtlas can highlight park proximity for specific age groups or other demographic groups for whom access could be especially beneficial.

How were the data for this map created?

The data for this map were compiled from multiple GIS sources and other information from state, county, and local parks and recreation departments. Parks were included in this analysis if they were within a 5 km buffer around the EnviroAtlas community boundary. Each park entrance was then designated based on available information and satellite imagery. If a park was open to the street, for example, a city park comprised of a single block, entrances were estimated along the border of the park every 1/2 kilometer. The best available road dataset for each community was used to calculate the walking distance to the nearest park entrance from every point along the roads.

The percent of the block group population within easy walking distance of a park entrance (0.50 km or about 0.30 mile) was estimated using the EnviroAtlas [dasymetric](#) data and the distance calculation.

What are the limitations of these data?

All of the EnviroAtlas community maps that are based on land cover use remotely-sensed data. Remotely-sensed data in EnviroAtlas have been derived from imagery and have not been verified. These data are estimates and are inherently imperfect. Parks were included in this analysis if they were within 5 km of the EnviroAtlas community area boundary. The locations of these parks were estimated using available data and some parks may inadvertently have been overlooked. Walking distances were calculated using a national road dataset and do not typically account for walking along greenways or other trails throughout a city. There may be a shorter route to a park if such trails are available.

The estimated population counts within park proximity zones derive from EPA's dasymetric population product of 2010 Census block-level data mapped at 30-meter resolution. These estimates account for unpopulated areas such as public land, steep slopes, and water, but may assign population incorrectly to private parcels of undeveloped land.

Selected Publications

Cohen, D.A., J.S. Ashwood, M.M. Scott, A. Overton, K.R. Evenson, L.K. Staten, D. Porter, T.L. McKenzie, and D. Catellier. 2006. [Public parks and physical activity among adolescent girls](#). *Pediatrics* 118(5): e1381—e1389.

Hansmann, R., S.-M. Hug, and K. Seeland. 2007. [Restoration and stress relief through physical activities in forests and parks](#). *Urban Forestry & Urban Greening* 6(4): 213–225.

Maller, C., M. Townsend, L. St. Leger, C. Henderson-Wilson, A. Pryor, L. Prosser, and M. Moore. 2008. [Healthy parks, healthy people: The health benefits of contact with nature in a park context](#). School of Health and Social Development, Deakin University, Melbourne, Australia.

Mowen, A., E. Orsega-Smith, L.L. Payne, B. Ainsworth, and G. Godbey. 2007. [The role of park proximity and social support in shaping park visitation, physical activity, and perceived health among older adults](#). *Journal of Physical Activity Health* 4(2):167–179.

Payne, L.L., E. Orsega-Smith, M. Roy, and G.C. Godbey. 2005. [Local park use and personal health among older adults: An exploratory study](#). *Journal of Park and Recreation Administration* 23(2): 1–20.

Rodríguez, D. A., G.-H. Cho, K.R. Evenson, T.L. Conway, D. Cohen, B. Ghosh-Dastidar, J.L. Pickrel, S. Veblen-Mortenson, and L.A. Lytle. 2012. [Out and about: Association of the built environment with physical activity behaviors of adolescent females](#). *Health & Place* 18(1): 55–62.

Seeland, K., S. Dübendorfer, and R. Hansmann. 2009. [Making friends in Zurich's urban forests and parks: The role of public green space for social inclusion of youths from different cultures](#). *Forest Policy and Economics* 11(1): 10–17.

West, S.T., K.A. Shores, and L.M. Mudd. 2012. [Association of available parkland, physical activity, and overweight in America's largest cities](#). *Journal of Public Health Management and Practice* 18(5): 423–430.

Wolch, J., M. Jerrett, K. Reynolds, R. McConnell, R. Chang, and N. Dahmann. 2011. [Childhood obesity and proximity to urban parks and recreational resources: A longitudinal cohort study](#). *Health & Place* 17(1): 207–214.

How can I access these data?

EnviroAtlas data can be viewed in the interactive map, accessed through web services, or downloaded. To find the EnviroAtlas 1-meter land cover grids created for each community, enter *land cover community* in the interactive map search box.

Where can I get more information?

There are numerous resources on the relationships between parks and human health and well-being; a selection of these resources is listed below. For additional information on data creation, access the metadata found in the drop-down menu for each map layer listed in the EnviroAtlas table of contents and click again on metadata at the bottom of the metadata summary page for more details. For parks data, access local data from parks and recreation departments. To ask specific questions about these data, please contact the [EnviroAtlas Team](#).

Acknowledgments

The data for proximity to parks were generated by Alexandra Sears, EPA Student Services Contractor. The fact sheet was created by Jessica Daniel, EPA Student Services Contractor, and Laura Jackson, EPA.