Estimated Walking Distance to a Park Entrance

This EnviroAtlas community map estimates the total walking distance in meters to a park entrance from any point within the community.

Why is proximity to parks important?

Parks increase the livability of urban areas and often improve aesthetics within communities. Parks come in many forms, from large forested parks to recreational fields. People often recreate in parks, which provide 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, including clean air and heat mitigation.

How can I use this information?

The map, Estimated Walking Distance to a Park Entrance, can be used to identify neighborhoods that have ready access to parks and those that are underserved and 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 socio-economic layers within EnviroAtlas, these maps can highlight park proximity for specific age groups or other demographic groups for whom access could be especially beneficial. The park proximity layer, when overlaid with the standard streets layer, will show users the walking distance to the nearest park from their home, office, or any other location within the featured community.

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 5km 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. These distances were then used to estimate the walking distance to a park entrance from

any point within the EnviroAtlas community area boundary. Areas with walking distances greater than 5km were omitted.

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 5km 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. Walking distances do not typically account for walking along greenways or other trails throughout a city, unless those trails were included in the road dataset. There may be a shorter route to a park if such trails are available. Areas with distances above 5km are displayed as "Insufficient Data" areas because there may be a park more than 5km beyond the EnviroAtlas community area boundary that was not analyzed during this study.

How can I access these data?

EnviroAtlas data can be viewed in the interactive map, accessed through web services, or downloaded. The EnviroAtlas land cover maps created for each community are available under the Supplemental Maps tab in the interactive map table of contents.

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. To ask specific questions about these data, please contact the EnviroAtlas Team.

Acknowledgments

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.