Abstract

Previous studies of park accessibility have utilized network analysis and dasymetric mapping to investigate pedestrian accessibility to park resources measured in acres per capita. Through a case study of Downey, California, this study extends on previous work in this area by combining network analysis and dasymetric mapping with robust park amenity auditing. The intention of this study is to provide a more detailed examination of how accessibility is affected by park condition and the types of facilities provided to park users. The study uses a method for dasymetrically mapping population data to land parcels, Esri's ArcGIS 10.1 Service Area Network Analyst tool, and a park amenity scoring system based on the Physical Activity Resource Assessment (PARA) instrument. The results of this research reveal that park accessibility in Downey is limited at multiple Service Area (SA) distance levels due to the presence of parks with high pedestrian accessibility but low amenities in the geographic center of the city and parks with low pedestrian accessibility but high amenities on the city's periphery. The results of this case study inform policy suggestions for future park developments. These policy suggestions include planning strategies for increasing pedestrian access to parks with developed amenities, which are distant from residential areas. Also, the study indicates which parks to nominate for development in highly accessible areas with few amenities.