

ICPSR 38586

**National Neighborhood Data
Archive (NaNDA): Parks by Census
Tract and ZIP Code Tabulation
Area, United States, 2018**

P.I. Documentation for Parks by ZIP Code
Tabulation Area Data

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**National Neighborhood Data Archive (NaNDA): Parks by Census Tract
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National Neighborhood Data Archive (NaNDA): Parks by ZIP Code Tabulation Area, United States, 2018



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Overview and Data Dictionary

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Dataset Overview

Description

This dataset describes the number and area of parks in each ZIP code tabulation area (ZCTA) in the United States. Measures include the total number of parks, park area, and proportion of park area within each ZCTA.

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Data Sources

Source data was obtained from ParkServe, a database of parks in 14,000 United States communities (Trust for Public Land, 2018b). ParkServe data was compiled by the Trust for Public Land in 2018 based on GIS data obtained directly from local communities and from publicly accessible websites and satellite imagery. ParkServe includes publicly owned local, state, and national parks; certain school parks; and privately owned parks that are publicly accessible. Parks in gated communities, golf courses, and private cemeteries are excluded (Trust for Public Land, 2018a).

ZCTA boundaries are based on the 2019 version of the US TIGER/Line shapefiles (United States Census Bureau, 2019).

Coverage

The dataset contains one observation per ZIP code tabulation area in the United States, including Alaska and Hawaii. US island territories are excluded.

Methodology

Prior research has demonstrated that access to parks and greenspace can have a positive impact on many aspects of and contributors to health, including physical activity levels (Kaczynski et al., 2007), healthy aging (Finlay, 2015), and sense of well-being (Larson et al., 2016). Neighborhood parks can also contribute to sense of community (Gómez, 2015). This dataset builds on this research by allowing researchers to examine the number and density of parks within any ZIP code in the United States.

We began by projecting the 2019 TIGER/Line shapefiles for ZCTAs to the North American Albers equal-area conic projection in ArcGIS Pro. (The ParkServe shapefiles already used the Albers projection). We then performed a pairwise intersect between the ParkServe shapefile and TIGER/Line shapefiles.

To obtain the total number of parks in each ZCTA, we counted the unique ParkIDs of open parks fully or partially overlapping the ZCTA. An “open” park was defined as one with ParkStatus = Open and ParkAccess = Open. A few additional parks had ParkStatus = Open and a ParkAccess value not found in the documentation. We treated these as open since over 90% of parks in the dataset were open.

To control for a few ZCTAs containing very high numbers of parks, we added four total parks variables top-coded at one, three, five, and ten parks respectively.

Lastly, we calculated the total area of each ZCTA in square meters and square miles (1 square meter = 3.86102e-7 square miles), the total park area within each ZCTA in square meters and square miles, and the proportion of park area to ZCTA area.

Usage Note

Users should be aware that ZCTAs are not equivalent to ZIP codes. ZIP codes are linear mail delivery routes created by the US Postal Service. ZIP code tabulation areas are spatial features consisting of census blocks grouped by the predominant ZIP code found on the block (United States Census Bureau, 2020).

In some cases, a location's address is not the same as its ZCTA. For example, some ZIP codes represent single-point addresses such as large post offices or office buildings. Also, the ZIP code for an address may not match its ZCTA if the ZIP code is not the most common ZIP code on the block. See the Census Bureau's ZCTA overview at <https://www.census.gov/programs-surveys/geography/guidance/geo-areas/zctas.html> (United States Census Bureau, 2020) for more information on how ZCTA boundaries are calculated.

Users wanting to combine this dataset with ZIP code geocoded data must use a ZIP code to ZCTA crosswalk. Such a crosswalk is available on the UDS Mapper website at <https://www.udsmapper.org/zcta-crosswalk.cfm> (John Snow Inc., 2018). Sample code for merging the UDS Mapper crosswalk with NaNDA datasets is available on the NaNDA repository at <https://www.openicpsr.org/openicpsr/project/120088/> (Chenoweth & Khan, 2020).

Variables

Variable Name	Type	Obs	Unique	Mean	Min	Max	Label	Additional Information
zcta19	string	33144	33144	.	.	.	ZIP code tabulation area, 2019	
any_open_park	byte	33144	2	0.514754	0	1	Indicator variable: one or more open parks in ZCTA	
count_open_parks	int	33144	104	4.453928	0	236	Total number of open parks in ZCTA	
count_open_parks_tc10	byte	33144	11	2.828958	0	10	Total number of open parks (top coded at 10) in ZCTA	A value of "10" indicates that there are 10 or more parks in the ZCTA.
count_open_parks_tc5	byte	33144	6	1.846458	0	5	Total number of open parks (top coded at 5) in ZCTA	A value of "5" indicates that there are 5 or more parks in the ZCTA.
count_open_parks_tc3	byte	33144	4	1.265749	0	3	Total number of open parks (top coded at 3) in ZCTA	A value of "3" indicates that there are 3 or more parks in the ZCTA.
zcta_area	double	33144	33140	2.29E+08	5094	3.52E+10	ZCTA area, square meters	
zcta_area_sqmiles	float	33144	33135	88.56277	0.001967	13591.48	ZCTA area, square miles	
tot_park_area	float	33144	17061	1.53E+07	0	1.19E+10	Total area of open parks in ZCTA, square meters	
tot_park_area_sqmiles	float	33144	17061	5.8907	0	4609.923	Total area of open parks in ZCTA, square miles	
prop_park_area_zcta	float	33144	17055	0.046118	0	1	Proportion of open park land within ZCTA (tot_park_area / zcta_area)	

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