

The Best and Worst Cities for Public Restroom Availability Research Methodology

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Introduction

In order to identify the public restroom availability in US cities, we analyzed 50 cities using 7 different factors to determine which metropolitan areas are the best and worst public restroom availability.

The sources used for the research can be found in the table provided <u>here</u>.

City Selection

For this study, 50 U.S. cities were selected based on a combination of population size, cultural influence, and economic importance within their respective regions. The selection aimed to represent cities that are not only significant demographically but also hold particular relevance to the study's objective of creating a representative overview of America's public restroom situation, ensuring a comprehensive and meaningful analysis.

The population size of each city was obtained from the <u>U.S. Census Bureau</u>, based on estimates as of July 1, 2023.



Definition of 'Public Restroom'

Public restrooms included in this analysis are facilities intended for use by the general public, commonly found in parks, shopping centers, transportation hubs, government buildings, and other shared spaces. These restrooms can either be standalone structures or integrated into larger buildings and are typically maintained by municipalities or public agencies. Most public restrooms are free to use, though some may require payment or restricted access. Restrooms that belong to a café or restaurant were not considered, as their use is typically tied to making a purchase on-site.

Public Restroom Availability level per city

To categorize the availability of public restrooms in each city, we established five distinct levels based on the number of restrooms per 100,000 residents. These levels range from "Critically Low" to "High," providing a clear benchmark for public restroom access. Cities with 5 or fewer restrooms per 100,000 residents fall into the "Critically Low" category, indicating a severe lack of facilities and potential challenges for residents and visitors. The "Very Low" category includes cities with 5.1 to 10 restrooms, where access remains extremely limited. "Low" access, with 10.1 to 15 restrooms, signifies somewhat restricted availability. Cities with "Moderate" access (15.1 to 25 restrooms) demonstrate a more balanced offering of facilities. Finally, cities with 25.1 or more restrooms per 100,000 residents fall into the "High" category, reflecting abundant access to public restrooms.

This classification provides a structured means of assessing restroom availability across diverse urban environments.

Weighting

To ensure data quality and improve accuracy for a comprehensive analysis, a weighted average was derived from three primary data sources.

The assigned weights are as follows:

Number of Public Restrooms according to Publicly Available Data: 50% of the total score
Number of Public Restrooms according to OpenStreetMap: 30% of the total score
Number of Public Restrooms according to The Trust for Public Land: 20% of the total
score

The rationale for this weighting scheme is based on the perceived reliability of the sources. Official government data from publicly available data was deemed the most accurate and credible and therefore received the highest weighting (50%).

In instances where no data from publicly available data was available, the average was recalculated using equal weights for the Trust for Public Land as a source and OpenStreetMap as a source (50% each). This approach ensures a balanced estimate while prioritizing the most trustworthy data when available, thereby maintaining data integrity throughout the study.



Public restrooms availability according to publicly available data

The first data source relied, where possible, on publicly available data from government institutions, official reports, and newspaper articles. When such sources were available, they were included in the study, ensuring a more comprehensive and accurate representation of restroom facilities. A list of these sources, along with their respective years of reporting, is provided here.

Public restrooms availability according to OpenStreetMap

The second data source leveraged user-contributed mapping data from OpenStreetMap (OSM). Restroom facilities were identified using the "amenity=toilets" tag, which is widely employed within OSM to designate the locations of public toilets. This tag captures a broad range of restrooms, from freestanding public facilities to those located within commercial and municipal buildings. By including all instances where this tag was applied, we obtained a comprehensive dataset representing restroom availability based on community-driven mapping efforts. While the data is expansive, it reflects user contributions and may vary in accuracy or completeness depending on regional participation levels. This source provides valuable insight into public restroom distribution, especially in areas where official records may be incomplete or unavailable.

Public restrooms availability according to "The Trust for Public Land"

Trust for Public Land was used as the third source to count the number of publicly available restrooms. This source specifically focuses on restroom facilities within public parks. This dataset provided a comprehensive view of freestanding restroom structures or permanent buildings equipped with plumbing. It intentionally excluded temporary facilities such as port-a-potties or portable restrooms to ensure the accuracy of the data regarding long-term, fixed public restrooms. The dataset also counted restroom buildings as a whole rather than individual stalls or gender-specific facilities, which allows for a standardized measurement of restroom availability in public park areas. This source offers a reliable snapshot of permanent restroom infrastructure in parks, which often serve as key locations for public amenities.

Scoring

To ensure a fair and accurate ranking, the number of public restrooms was standardized based on population size. This was achieved by calculating the number of restrooms per 100,000 residents in each city. By normalizing the data in this manner, the ranking accounts for population differences, enabling a more meaningful comparison of public restroom availability across cities of varying sizes. This approach ensures that larger populations do not skew the results and that cities are evaluated on a per capita basis.