



Public Administration Job Density

This map estimates the number of public administration jobs per unprotected acre within each census block group in 2010.

Why is public administration job density important?

Public administration job density is one of many measures or variables used by city planners to examine the proportions of residents, jobs, and services in urban areas and to guide development planning for efficient city design and transit networks. Besides indicating the number of jobs per unprotected acre within a census block group, the metric also suggests a level of economic activity in the block group. Job densities in particular job classes may be compared with overall employment density to highlight job distributions within and among block groups.

The public administration sector employs workers that create laws and policy, manage public programs, maintain law and order, and provide for public safety. The public administration employment classification contains jobs in government (e.g., federal, state, and local executive officers, legislative bodies, and public finance); justice, order, and safety (e.g., courts, legal counsel, police protection, correctional institutions, and fire protection); administration of programs (e.g., human resources, public health, education, veterans' affairs); environmental quality, housing, transportation, space research, national security, and international affairs.¹ In March of 2013, over 21.8 million people were employed by federal, state, and local governments.² The term public administration differs from public employment, which would also include all public education jobs (covered separately under NAICS 61).

Service jobs of all types presently make up about 84% of the overall economy.³ The public administration category in the Smart Locations database is one of a group of job categories that is often listed in the service sector in the economics literature. Wages within the class range from entry-level wages to executive officer salaries. Workers employed in public administration generally require higher levels of education (e.g., undergraduate and graduate degrees) and they are more highly paid as a result. Jobs in public administration are typically middle- to high-wage jobs. Because the majority of public administration jobs provide a personal service and rely on direct customer contact, they are



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not subject to offshoring as are office, service, and manufacturing jobs. However, public administration jobs are influenced by budget deficits, particularly at the state and local level. Over 580,000 jobs have been lost in federal, state, and local government since 2009 and public administration job numbers continued to decline through 2013 even as private sector jobs grew.⁴

Public administration job densities are higher in urban areas and particularly in larger metropolitan areas where governmental programs and activities may be concentrated. However, the number and density of public administration jobs may be higher than expected even in remote undeveloped areas (for, example near national and state parks). In urban areas, knowing the distribution of various job densities is prerequisite to planning for transportation networks and affordable housing developments.

Smart Growth planning programs promote the development of a diversity of residences, employment opportunities, and services within compact neighborhoods. Planning strategies promote housing in job-rich areas and new employment centers in dense residential zones. Resident workers with easy accessibility to a diversity of job types in various wage classes can reduce not only vehicle miles traveled (VMT) but fuel consumption and [greenhouse gas emissions](#) (GHGs) associated with employee commuting trips.⁵

How can I use this information?

This map, Public Administration Job Density, allows users to evaluate various block groups by the number of public

administration jobs per unprotected acre relative to other characteristics. Comparing this map to areas of relatively high-, low- and middle-wage worker residential density may indicate the effectiveness of community design and road networks to link potential workers with jobs. Planners may want to promote increased housing in block groups with high public administration employment density and a low resident working population. They may identify neighborhoods with optimal densities of jobs and housing that can support new or enhanced transit service. Economic development agencies in regions with limited transit service may use this map to encourage the siting of new employment centers in areas that are highly accessible to the regional workforce. This data layer may be compared to other EnviroAtlas demographic and Smart Location data layers. The aerial-image base map (seen by increasing the transparency of the map layers) can be used to show the spatial distribution of the built environment within block groups.

How were the data for this map created?

The 2010 [Census LEHD](#) (Longitudinal Employer-Household Dynamics) database gave the total number of public administration jobs (NAICS sector 92) by U.S. Census block group for every state but Massachusetts. EPA then isolated areas of the block group that were not protected from development. NAVTEQ data (2011) provided the location of federal, state, and local parks, zoos, cemeteries, public beaches, and water bodies. The Protected Area Database (PAD-US v1.3) provided the locations of parks and protected natural areas as well as privately-owned land area with restrictions on development (such as conservation easements). The relevant portions of each protected area dataset were intersected and dissolved into a single polygon layer that represented all areas in which development was restricted. The resulting protected areas layer was then integrated with the block group areas in GIS. EPA used this block group unprotected acreage as the denominator to calculate public administration employment density. The metric, listed as D1c8_Pub10, may be found in the [Smart Location Database User Guide](#).

Selected Publications

1. U.S. Bureau of Labor Statistics. 2015. [Public Administration: NAICS 92](#). Accessed July 2015.
2. Willhide, R.J. 2014. [Annual survey of public employment and payroll summary report: 2013](#). U.S. Census Bureau Statistical Brief. Accessed July, 2015.
3. Haksever, C., and B. Render. 2013. [Service management: An integrated approach to supply chain management and operations](#). FT Press, Upper Saddle River, New Jersey. 528 p.
4. Greenstone, M., and A. Looney. 2012. [A record decline in government jobs: Implications for the economy and America's workforce](#). Brookings on job numbers. Brookings, accessed July, 2015.
5. National Research Council. 2009. [Driving and the built environment: The effects of compact development on motorized travel, energy use, and CO₂ emissions](#). Special Report 298, The National Academies Press, Washington, D.C. 240 p.

What are the limitations of these data?

Public administration job density, when representing state or federal employment in remote locations, may be zero when the Number of Jobs metric shows a significant number of jobs because the denominator (unprotected or developed acreage) may be zero or close to zero. It is also important to remember that jobs or residences are not distributed evenly throughout the area of a block group. A diversity of land uses or activities may be sparsely distributed in large census block groups. On the other hand, a small block group may be uniform and low in diversity, but it may be located within easy access to a more diverse block group.

How can I access these data?

EnviroAtlas data can be viewed in the interactive map, accessed through web services, or downloaded. Data from the [2010 U.S. Census](#) may be viewed on and downloaded from the census website.

Where can I get more information?

A selection of resources on the relationships among public administration jobs, city planning, and environmental quality is listed below. More details about this metric are available in the [Smart Location Database User Guide](#). In addition, EPA's [Smart Growth Program](#) provides tools, resources, and technical assistance to communities seeking to pursue compact and mixed-use development strategies to create vibrant, walkable neighborhoods while protecting public health and the environment. For additional information on the data creation process, access the metadata for the data layer from the drop down menu on the interactive map table of contents and click again on metadata at the bottom of the metadata summary page for more details. To ask specific questions about this data layer, please contact the [EnviroAtlas Team](#).

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