



Number of Middle-Wage Workers (Workplace Location)

This EnviroAtlas national demographics map estimates the number of workers earning between \$1250 and \$3333 per month summarized by workplace location within each U.S. Census block group.

Why are middle-wage workers important?

Middle-wage or middle-skill jobs are those that typically require a high school diploma and some additional education or vocational training beyond high school.¹ Until the late 20th century, well-paid middle-wage jobs in the U.S. were available in manufacturing. Manufacturing jobs have declined by 18% since 1960, mainly through computerization, automation, and off-shoring of jobs to other countries.¹ Studies in labor trends of the last 25 years showed a decline of middle-wage jobs in the 1990s as both low- and high-wage jobs grew. In the first decade of the 2000s, middle-wage job losses continued, the number of low-wage jobs grew, and high-wage jobs were stagnant.² A reduction in demand for middle-wage workers resulted in lower wages for the remaining workers in that class and a decline of some former middle-wage workers into the low-wage ranks.³

Researchers disagree about whether middle-wage jobs have disappeared permanently. Low wage jobs have dominated the recovery after the recession of 2008, although numbers vary regionally, with some metropolitan centers showing gains in all categories.⁴ Demand still exists for a number of middle-wage jobs not subject to automation and off-shoring, such as clerical, construction, installation/repair, and health care.¹ Some researchers argue that public policies geared toward middle-wage workers should promote high school vocational programs, two year associate degrees, certification programs, and apprenticeships.¹

From a city planning perspective, knowing the distribution of low- and middle-skill jobs is prerequisite to planning for affordable housing centers that are accessible to those jobs.⁵ The development of affordable housing is an antidote to gentrification, which often replaces low- and middle-income housing with housing for more affluent residents. The distribution of affordable-accessible housing relative to jobs is a useful measure of equity in city planning. A common benchmark states that housing and transport should together total less than 45% of income.⁶ Transport costs alone can vary from about 10% of earnings in compact communities up to 25% in automobile-dependent suburban communities.⁶



Over the last several decades, many communities across the U.S. have experienced a decline in traditional downtown employment centers in favor of office parks and retail in outer suburbs. The movement of jobs to the suburbs away from urban residential core areas has been most prevalent in industries that offer low- and middle-skill jobs. Changing demographic patterns in suburbia suggest that more emphasis is needed on creating compact neighborhoods within suburban communities as well as in urban centers.

Planning strategies for compact neighborhoods promote housing in job-rich areas and new employment centers in dense residential zones in addition to planning for walkable and bike-able neighborhoods and increased access to public transportation. Land use diversity that mixes housing, jobs, and services within neighborhoods can reduce vehicle miles traveled by making walking, biking, and transit more appealing. Recent studies suggest that consistently reducing private auto usage through compact development design guidelines nationwide would help to improve air quality and public health through lower [greenhouse gas emissions](#).⁵

How can I use this information?

This map, Number of Middle-Wage Workers (Workplace Location), may be used with other EnviroAtlas demographic and Smart Location data layers to compare the proportions of residents, jobs, and services among community census block groups. Identifying neighborhoods with or without a middle-wage worker to job balance can be useful in a number of different urban planning contexts. Planners can promote increased job diversity or increased affordable

housing in neighborhoods with a low number of middle-wage workplaces. Overall employment may be compared to the diversity of various job types and wage classes among individual block groups.

Transit planners may wish to identify neighborhoods and corridors that can support new or enhanced transit service. Ranges in density numbers for housing and jobs are used by local governments to justify cost-effective transit investment and to promote development in areas near potential transit stations to ensure maximum transit use.

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 the block groups. For select communities, users can overlay EnviroAtlas community land cover maps that show impervious surfaces, street trees, and other common land covers at 1-meter resolution.

How were the data for this map created?

The [2010 Census](#) Longitudinal Employer Household Dynamics Work Area Characteristics tables ([LEHD WAC](#)) provided a count of the number of middle-wage workers, that is, workers earning between \$1250 and \$3333 per month, summarized by their workplace location in each census block group. For more information, see variable E_MedWageWk in the [Smart Location Database User Guide](#).

What are the limitations of these data?

Census block groups typically include a mixture of developed, undeveloped, residential, and business areas. A balance of middle-wage workers and jobs across block groups does not necessarily indicate that the majority of middle-wage residents avoids commuting and works locally. The metric highlights regional patterns or specific

neighborhoods lacking middle-income workers with access to jobs that would benefit from further study.

How can I access these data?

EnviroAtlas data can be viewed in the interactive map, accessed through web services, or downloaded. This data layer is incorporated into a larger EPA data product called the [Smart Location Database](#). The Smart Location Database is a nationwide geographic data resource for measuring location efficiency. Most attributes are available for every census block group in the United States.

Where can I get more information?

A selection of resources on the relationships among middle-wage workers, 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 transit-oriented development strategies to protect public health and the environment. For information on how city planning strategies may affect human health, visit the [Eco-Health Relationship Browser](#). 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](#).

Acknowledgments

Kevin Ramsey, former EPA ORISE Fellow, developed the metric. Alexander Bell, Renaissance Planning Group, generated the data. The fact sheet was created by Sandra Bryce, Innovate!, Inc. and reviewed by Ted Cochin, EPA Office of Sustainable Communities.

Selected Publications

1. Holzer, H.J., and R.I. Lerman. 2007. [America's forgotten middle-skill jobs: Education and training requirements in the next decade and beyond](#). The Workforce Alliance, Washington, D.C. 32 p.
2. Autor, D. 2011. [The polarization of job opportunities in the U.S. labor market: Implications for employment and earnings](#). *Community Investments* 23(2):11–16.
3. Autor, D.H., L.F. Katz, and M.S. Kearney. 2006. [Measuring and interpreting trends in economic inequality: The polarization of the U.S. labor market](#). AEA Papers and Proceedings 96(2):189–194.
4. Smart City Memphis. 2013. [The uneven growth of high and low wage jobs](#). Accessed April 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.
6. Litman, T. 2014. [Affordable-accessible housing in a dynamic city: Why and how to increase affordable housing development in accessible locations](#). Victoria Transport Policy Institute, Victoria, B.C.