

# Methodology Statement: 2017 Esri Daytime Population

An Esri® White Paper  
May 2017



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Knowing an area's demographic landscape is essential in the decision-making process for many public and private entities. Whether it is a retailer searching for the most profitable location for expansion or first responders mapping vulnerable populations for disaster preparations, utilizing a complete demographic profile is an essential decision-making input. Along with our comprehensive data catalog describing resident populations, Esri's 2017 daytime population data adds clarity when the day part is a significant consideration in an analysis.

## Data Sources and Model

A trade area can contain very distinct day and night demographic profiles. Populated areas can be residential, commercial, industrial, administrative, or some combination of each. Vibrant city centers can contain substantially larger numbers of people during the typical workday than during evening hours. Esri's daytime population model provides invaluable insight into an area's day part population expansions and contractions.

The estimates are generated using a mix of inputs from Esri's updated demographics, the decennial census, American Community Survey (ACS), and business data from Infogroup. Moreover, the modeling process incorporates the important methodological distinction between workers and persons employed. The former represents persons working throughout the workday, while the latter also includes persons employed but absent from work for various reasons such as illness, personal business, or vacation.

Furthermore, the model fittingly accounts for the distinct populations in group quarters. The nonmarketable, incarcerated adult population is considered out of scope and excluded from the estimates. The group quarters population in military installations is reconciled with the more broadly defined armed forces population that can cover personnel living off base as well.

The workday population is disaggregated into two primary groups: workers and residents.<sup>1</sup> The former is estimated using the geographic worker flow data from ACS and employment distributions from Infogroup to establish place-of-residence and place-of-work linkages. The end result is an estimate of the total daytime population covering both residents and workers that can be leveraged for a more detailed and complete demographic analysis for any neighborhood in the United States.

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<sup>1</sup> It is important to note the differences in definition between Esri's daytime estimates of workers and residents with respect to our current-year, resident-based estimates of total employment and total population. The latter two variables are a tabulation of persons based on where they live. The daytime estimates are not. Daytime workers cover persons who not only live and work in the same area but also those who work in the area but live elsewhere (i.e., commuters). Armed forces personnel, living on and off base, are also classified as workers. Moreover, those employed but not at work are classified as a daytime resident. Daytime residents also includes the population under 16 years of age and working-age persons who are unemployed or not in the labor force (i.e., retirees; homemakers; college students; and miscellaneous noninstitutional and institutional group quarters populations in nursing homes, juvenile detention centers, homeless shelters, etc.).

For more information about business data, call 1-800-447-9778.

**Esri's Data  
Development Team**

Led by chief demographer Lynn Wombold, Esri's data development team has a 30-year history of excellence in market intelligence. The combined expertise of the team's economists, statisticians, demographers, geographers, and analysts totals nearly a century of data and segmentation development experience. The team has crafted data methodologies, such as the demographic update, segmentation, the diversity index, and the Retail MarketPlace database, which are now industry benchmarks.





Esri inspires and enables people to positively impact their future through a deeper, geographic understanding of the changing world around them.

Governments, industry leaders, academics, and nongovernmental organizations trust us to connect them with the analytic knowledge they need to make the critical decisions that shape the planet. For more than 40 years, Esri has cultivated collaborative relationships with partners who share our commitment to solving earth's most pressing challenges with geographic expertise and rational resolve. Today, we believe that geography is at the heart of a more resilient and sustainable future. Creating responsible products and solutions drives our passion for improving quality of life everywhere.



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