

# DATA DESCRIPTION



## Total Employment Data by Census Block Group

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Bureau of Labor Statistics  
U.S. Department of Labor  
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Note: Data developed by the Bureau of Labor Statistics for the NOAA Coastal Services Center

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### Introduction

These data represent total business establishments, employment, and quarterly wages aggregated to Census block groups and are from the Bureau of Labor Statistics' Quarterly Census of Employment and Wages (QCEW).

### Data Source

The QCEW program is a cooperative program of the U.S. Department of Labor's Bureau of Labor Statistics and state employment security agencies. The QCEW program produces a comprehensive tabulation of employment and wage information for workers covered by state unemployment insurance (UI) laws and federal workers covered by the Unemployment Compensation for Federal Employees program. (See the Bureau of Labor Statistics' QCEW "Frequently Asked Questions" for more information: [www.bls.gov/cew/cewfaq.htm](http://www.bls.gov/cew/cewfaq.htm))

Every quarter, under the laws of each state, businesses are required to report the number of employees for all 3 months, as well as total wages, taxable wages, UI taxes, and administrative data, such as physical location addresses. After these UI reports are collected and entered by the state UI department, they are passed to the state QCEW program for reviewing, editing, and publishing. These data also are used for the QCEW business register. Employment data under the QCEW program represent the number of covered workers who worked during, or received pay for, the pay period including the 12th of the month.

In addition to the UI reports, the Bureau of Labor Statistics (BLS) funds two other data collection programs to support the needs of its users. Over a three-year period, the Annual Refiling Survey contacts all businesses to update or complete industry information and addresses. This is the primary method for updating physical location addresses within the QCEW business register. The other method for updating address information is the quarterly Multiple Worksite Report that

collects data for each individual establishment of a multi-unit business. The combination of information from these sources makes up the resulting QCEW program. The program's comprehensiveness results in precise business and employment data with substantial industry and geographic detail.

Publicly available files include data on the number of establishments, monthly employment, and quarterly wages by industry, by county, and by ownership sector for the entire United States. These data are aggregated to annual levels, to higher industry levels, and to higher geographic levels (national, state, and metropolitan statistical area).

## **Geocoding**

Address geocodes are derived using the physical location addresses of the business establishments. Addresses are geocoded by BLS using commercial software that accesses U.S. postal data files. This software estimates the location of each address record from an input file and standardizes the address. These standardized addresses are then matched against a geographic base file, which contains directories of street segment records. If the geocoding software is unable to match against an address, it will attempt to geocode to the ZIP code centroid. These matching processes assign geographic codes to address records, establishing their spatial location.

Not all business establishments have provided the state employment security agencies with physical location addresses or breakouts of employment in multiple locations. Only business establishments for whom accurate physical locations are available are included in the data.

## **Method Used**

Within GIS software, spatial joins are performed to join geocoded employer records to Census block group data. Like joining two tables by matching values in a field, a spatial join associates one layer to another based on the geographic location of the features in the layers.

The resulting data are reviewed to ensure preservation of individual employer data confidentiality. Confidential data are suppressed.

## **Reliability of Geocoded QCEW Data**

The nationwide QCEW database contains approximately 8.8 million business establishments with an employment level of approximately 135 million. By the third quarter of 2006, 83 percent of the QCEW records and 93 percent of the employment data had been geocoded. BLS considers this rate extremely good and sufficient to proceed with developing a wide range of products such as maps and subcounty research data. The remaining business establishments not geocoded are mostly new small firms or federal, state and local government entities that do not provide QCEW data by worksite. A small number of large business establishments also do not provide QCEW data by worksite. BLS continues to work with these firms to obtain accurate data by county and industry to allow for geocoding these areas.

## **Time Period Covered**

These data are from the second quarter of 2009. Employment data are from June 2009.