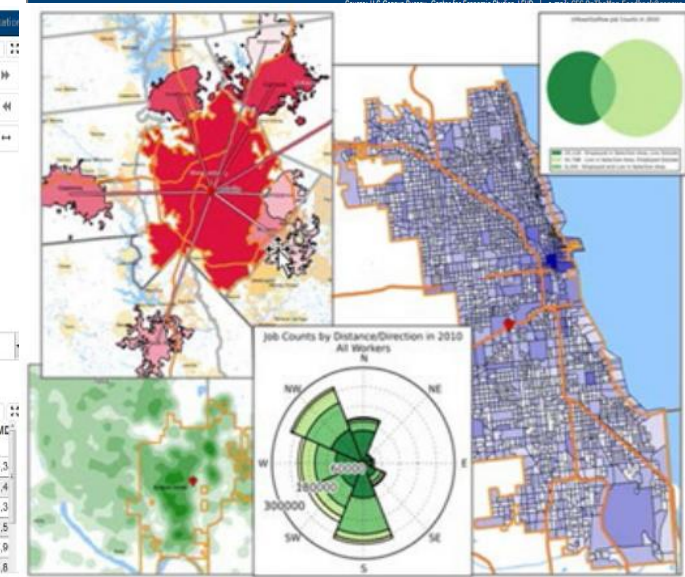
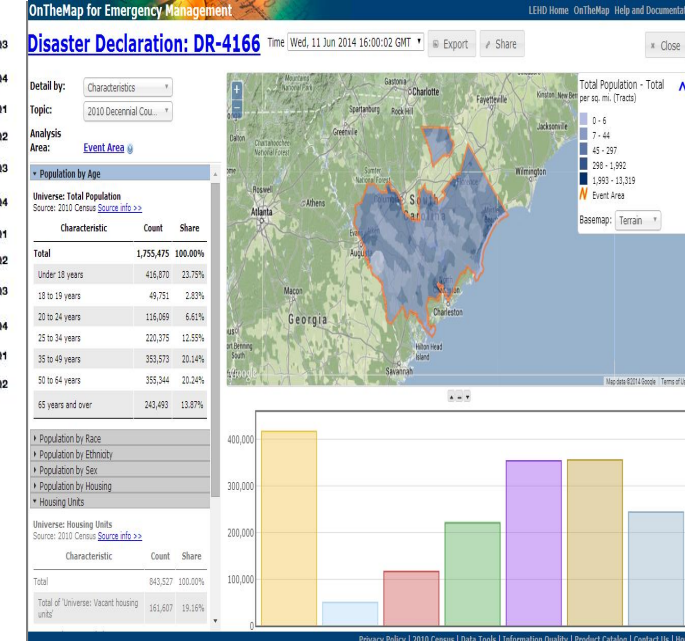
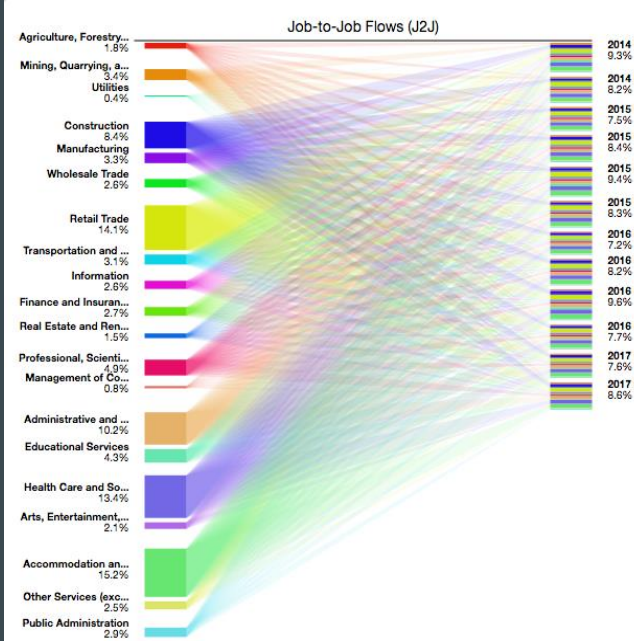


Longitudinal Employer-Household Dynamics: LED Partnership, Public-Use Data, and Innovative Web Tools

2018 New Mexico SDC Affiliates Meeting
November 14, 2018

Presented by: Eric Coyle
Data Dissemination Specialist
U.S. Census Bureau



Agenda

Longitudinal Employer-Household Dynamics (LEHD)/Local Employment Dynamics (LED)

- LEHD/LED Overview

Understanding N.A.I.C.S.

Census Geography Hierarchy

LEHD/LED Web Tools

Additional Resources

Q&A

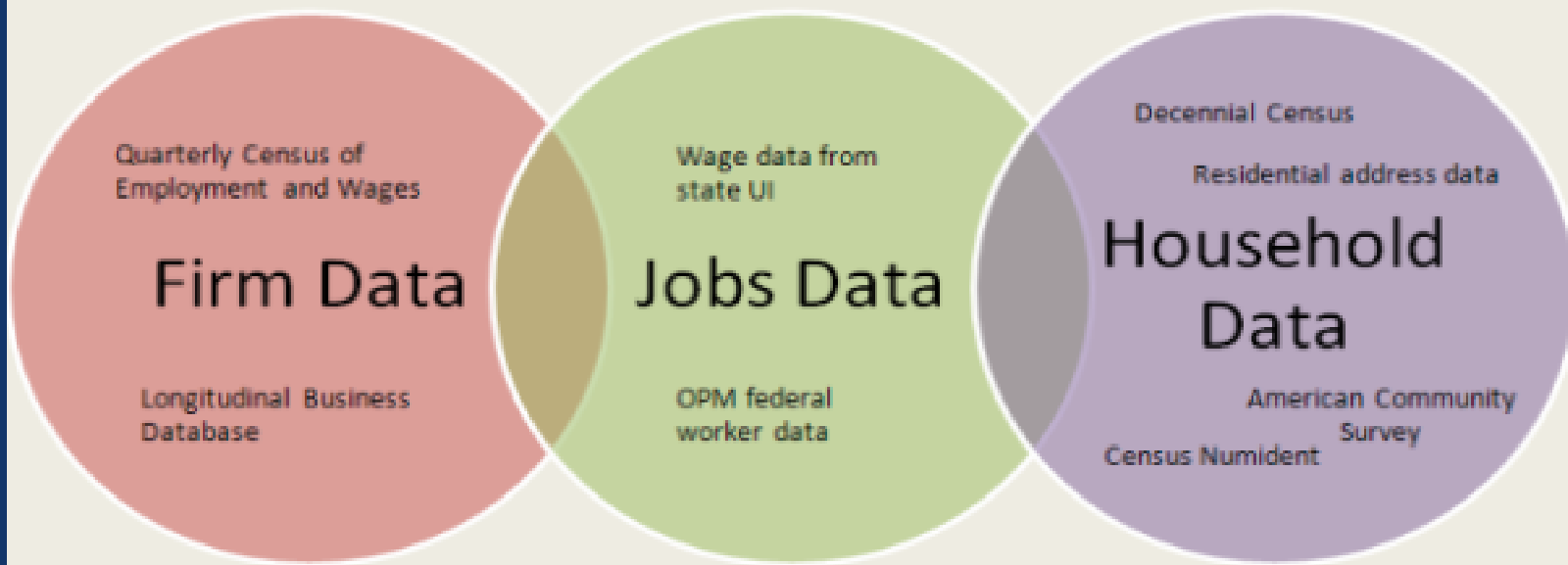
Longitudinal Employer-Household Dynamics (LEHD)

What is LEHD?

Until recently, many interactions between workers and firms were unobservable because there existed no link between employer and household data in the U.S. statistical system.

Since 1999 the Longitudinal Employer-Household Dynamics (LEHD) program at the U.S. Census Bureau has sought to fill this gap in the nation's statistical infrastructure by building a comprehensive database of longitudinally linked jobs data. The potential uses of the LEHD jobs data are far-reaching, both for unraveling important economic questions and for the provision of new statistical products.

The Employer-Employee Linked LEHD Data

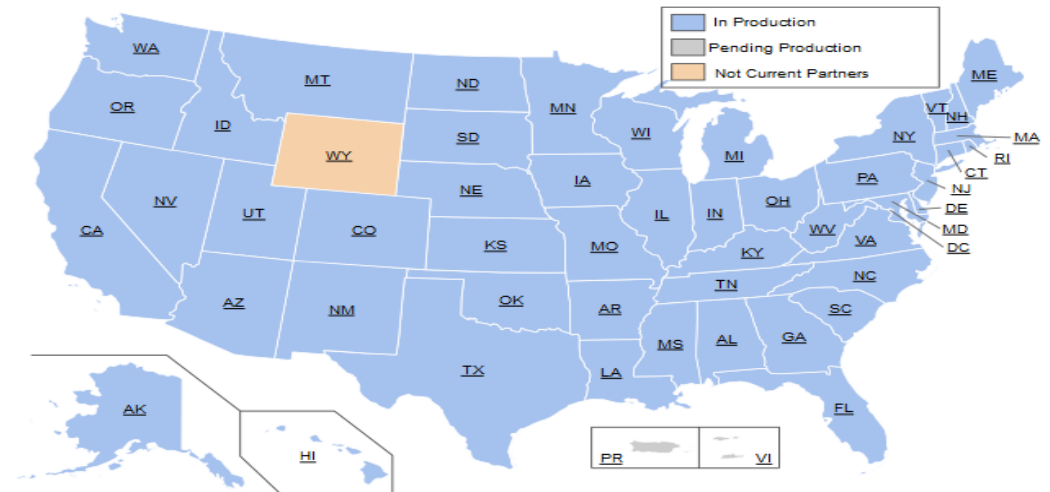


Where Do the Data Come From?

- Local Employment Dynamics (LED) Partnership
 - Begun in late 1990s with a few states
 - Some states have time series back to 1990 (AZ goes back to 2004)
 - Not currently producing data for
 - *Wyoming, Puerto Rico, and Virgin Islands

*Wyoming data available in Quarterly Workforce Indicator (QWI) Explorer tool

State Partners



- | | | | |
|--------------------------------------|-------------------------------|--------------------------------|--------------------------------|
| Alabama | Illinois | Montana | Rhode Island |
| Alaska | Indiana | Nebraska | South Carolina |
| Arizona | Iowa | Nevada | South Dakota |
| Arkansas | Kansas | New Hampshire | Tennessee |
| California | Kentucky | New Jersey | Texas |
| Colorado | Louisiana | New Mexico | Utah |
| Connecticut | Maine | New York | Vermont |
| District of Columbia | Maryland | North Carolina | Virginia |
| Delaware | Massachusetts | North Dakota | Washington |
| Florida | Michigan | Ohio | West Virginia |
| Georgia | Minnesota | Oklahoma | Wisconsin |
| Hawaii | Mississippi | Oregon | Wyoming |
| Idaho | Missouri | Pennsylvania | Puerto Rico |
| | | | Virgin Islands |

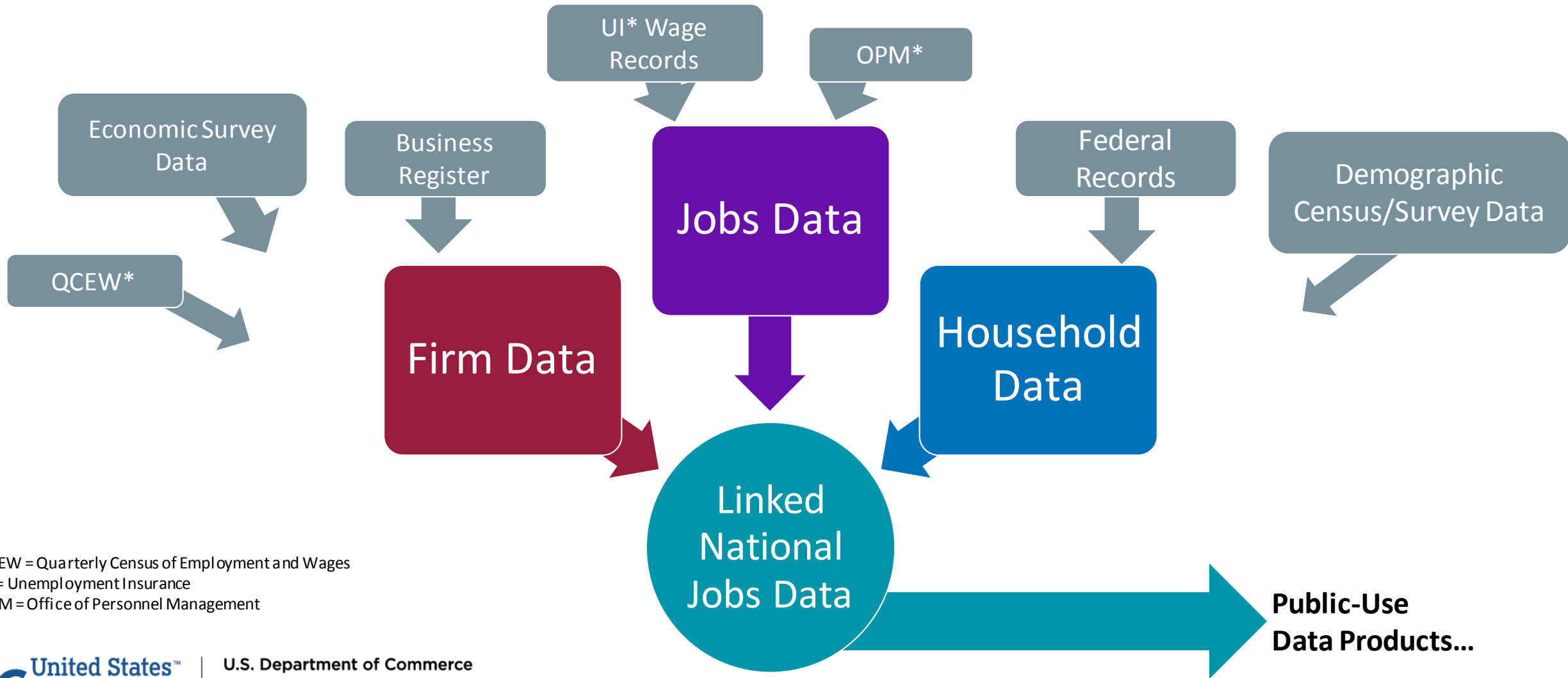
Local Employment Dynamics (LED) Data

- Provides unprecedented detail about America's jobs, workers and local economies.
- Provides longitudinal record of U.S. Employment
- Integrates existing data from state-supplied administrative records on workers and employers
- LED is an integral part of the DOC Open Government Plan to unlock public access to high-value government data

Building on State Inputs

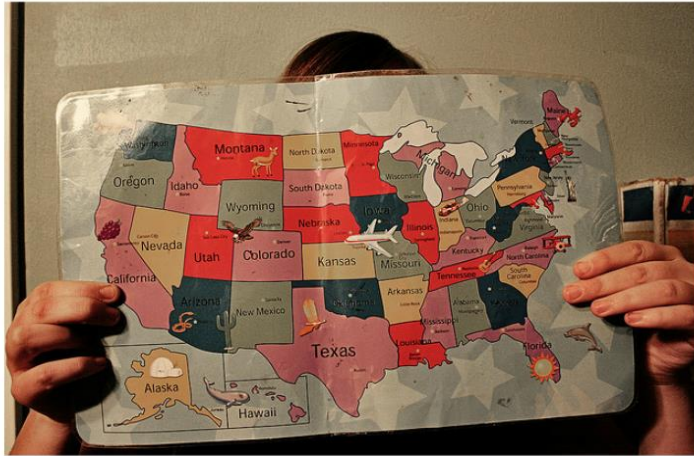
- We combine **state records** with other admin/census/survey data from the **Census Bureau** and **other Federal agencies**
- We can then create public statistics on:
 - Firms & Establishments
 - Jobs & Workers
 - By Firm and Person Characteristics
- Without new respondent burden

Admin. Records & LED Infrastructure



QCEW = Quarterly Census of Employment and Wages
UI = Unemployment Insurance
OPM = Office of Personnel Management

Local Employer-Household Dynamics: Public Use Data Products



The Quarterly Workforce Indicators (QWI)

- Employment
- Job Creation, Job Destruction, Hires, Separations, Turnover
- By industry, county, CBSA, state, Workforce Investment Area (WIA) and worker characteristics

Job-to-Job Flows (J2J)

- Traces worker movement through industries, geographic labor markets, and to/from employment

OnTheMap/LEHD Origin-Destination Employment Statistics (LODES)

- Employment at the Census block level by where workers live and work
- Popular uses - local economic development, business site selection, and emergency planning



Important to Know

- Job data cover over 95% of private employment and most state, local, and federal jobs
- Data availability: 1990-2018, start year varies by state and application, rolling end date
- Contains only UI-covered jobs: no US Post Office, no military jobs, no self-employed, 1099s, *etc.*
- Excludes some secretive 3-letter agencies (NSA, FBI)
- Employment and wages measured at start of Q2
- OnTheMap: “Distance” is a straight-distance calculation: reported primary place of work, reported home location. Not on a road network, not a commute measurement
- OnTheMap: 2-digit NAICS in the data now; working on 3-digit

North American Industry Classification System (NAICS)

Getting Started: Learning Your Industry

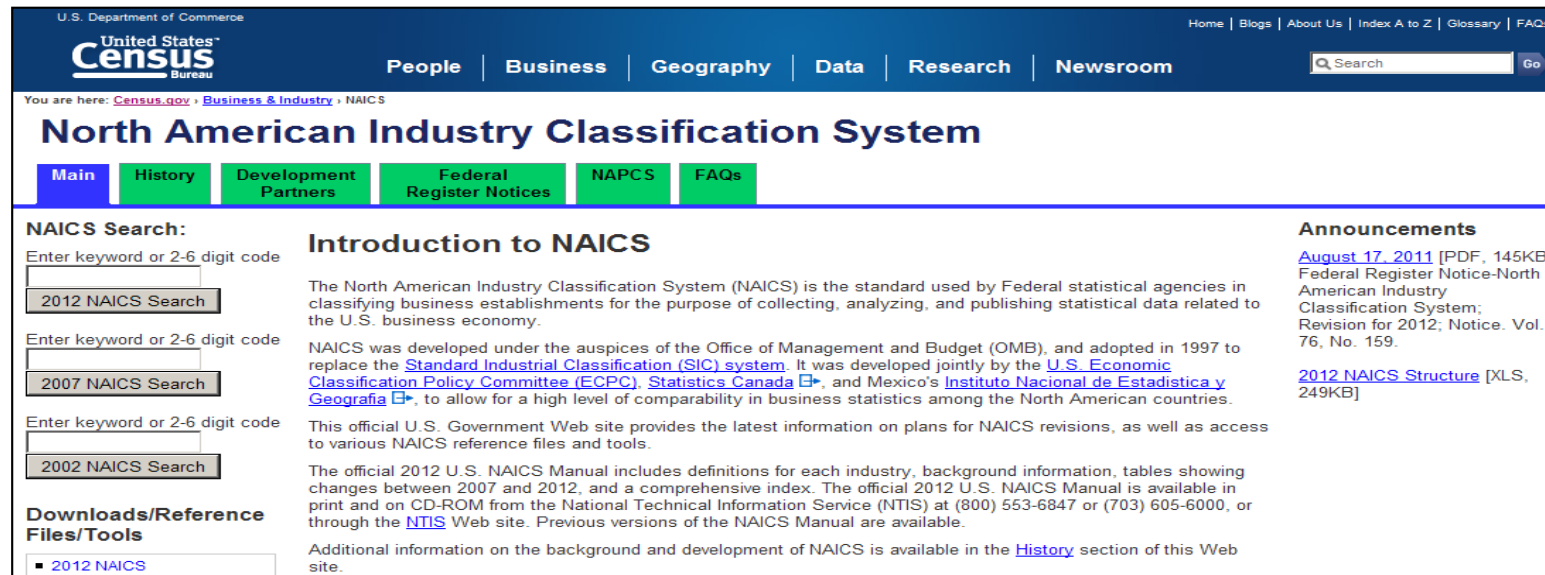
NAICS Codes

- North American Industry Classification System
 - Launched in 1997 as part of NAFTA
 - Codes are updated every 5 years (end in 2 & 7)
 - Hierarchical

<i>Level</i>	<i>Code</i>	<i>Examples</i>
Sector	45	Retail Trade
Sub-Sector	451	Sporting Goods, Hobby, Book, and Music Stores
Industry Group	4511	Sporting Goods, Hobby, and Musical Instrument Stores
Industry	45112	Hobby, Toy, and Game Stores
U.S. Industry	451120	Hobby, Toy, and Game Stores

More Information

- NAICS web site (<http://www.census.gov/eos/www/naics/>)
 - Industry definitions and Concordance tables
 - Relationships to other systems
 - Federal Register Notices



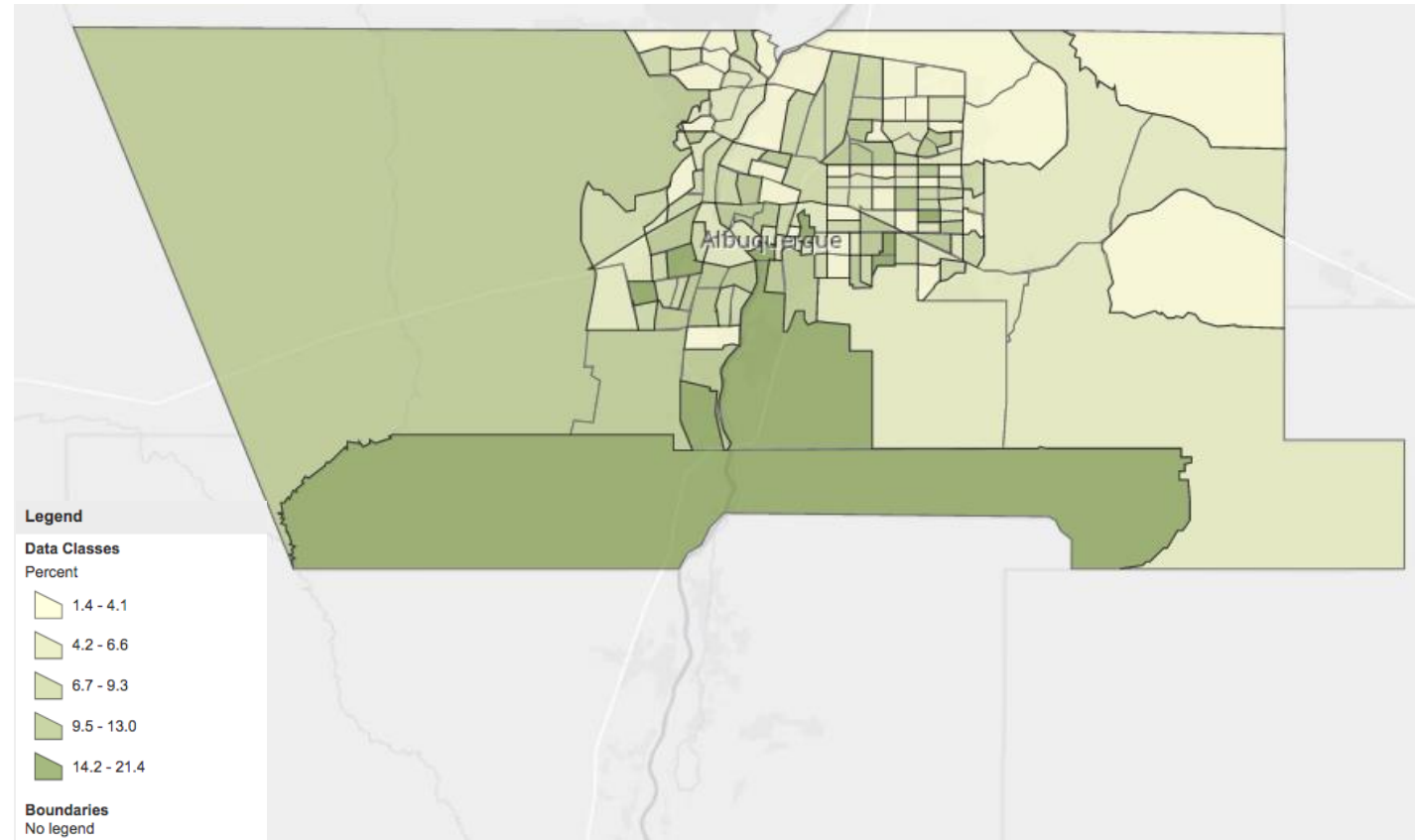
The screenshot shows the homepage of the North American Industry Classification System (NAICS) website. The header includes the U.S. Department of Commerce logo and navigation links for People, Business, Geography, Data, Research, and Newsroom. A search bar is located in the top right. Below the header, a breadcrumb trail indicates the current location: [Census.gov](#) > [Business & Industry](#) > NAICS. The main heading is "North American Industry Classification System". A navigation menu below the heading includes links for Main, History, Development Partners, Federal Register Notices, NAPCS, and FAQs. The "Federal Register Notices" link is highlighted in green. The main content area is divided into three columns. The left column, titled "NAICS Search:", contains three search boxes for the years 2012, 2007, and 2002, each with a "Search" button. The middle column, titled "Introduction to NAICS", provides a detailed overview of the system, its development, and its use. The right column, titled "Announcements", lists recent updates, including a PDF notice from August 17, 2011, and an XLS file for the 2012 NAICS Structure. A "Downloads/Reference Files/Tools" section at the bottom left of the main content area lists the 2012 NAICS manual.

Census Geography

Selected Census Geographic Concepts—Statistical Areas

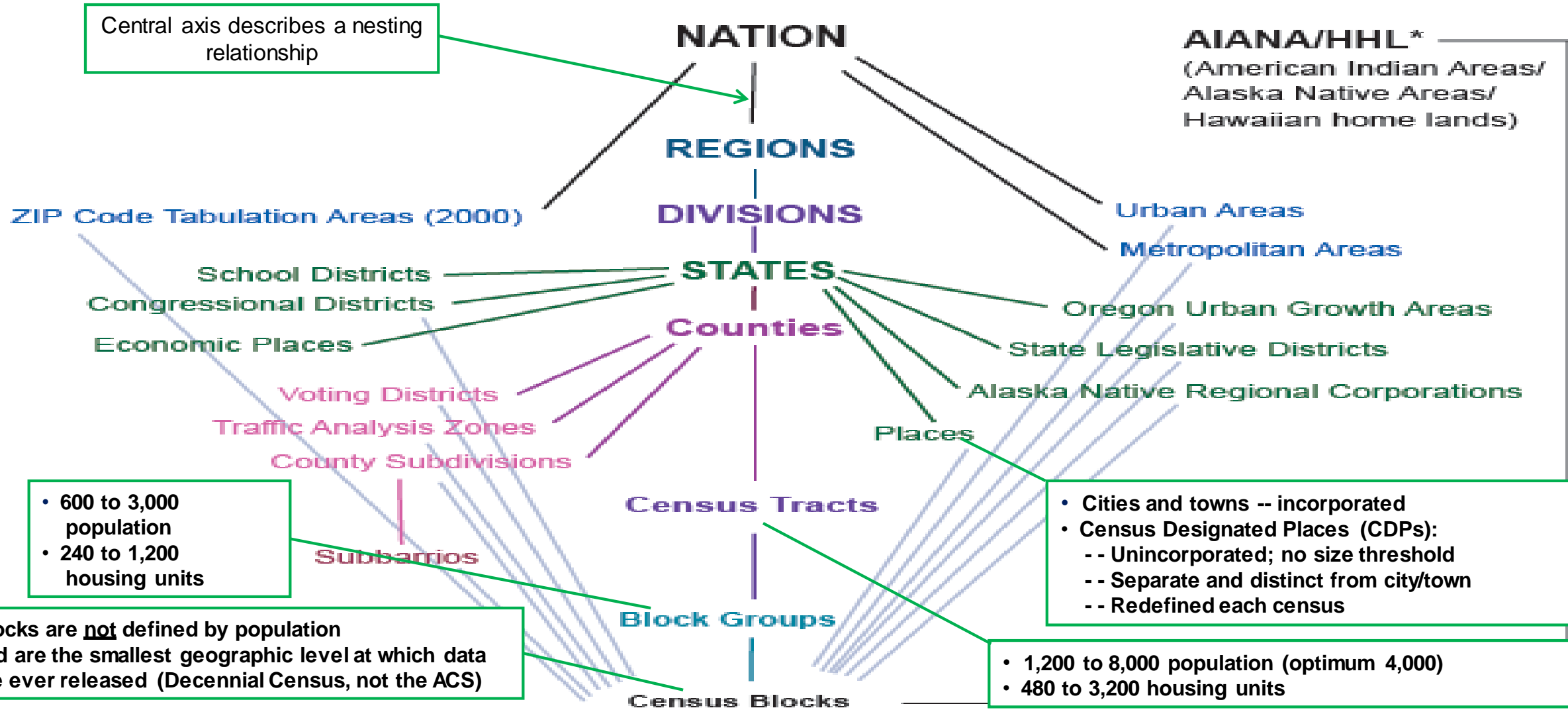
- [Regions](#)
- [Divisions](#)
- [Census County Divisions](#)
- [Census Designated Places](#)
- [Public Use Microdata Areas \(PUMA\)](#)
- [Zip Code Tabulation Areas \(ZCTAs\)](#)
- [Census Tracts](#)
- [Block Groups](#)
- [Block](#)

Unemployment Rate by Census Tracts in Bernalillo County



Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates

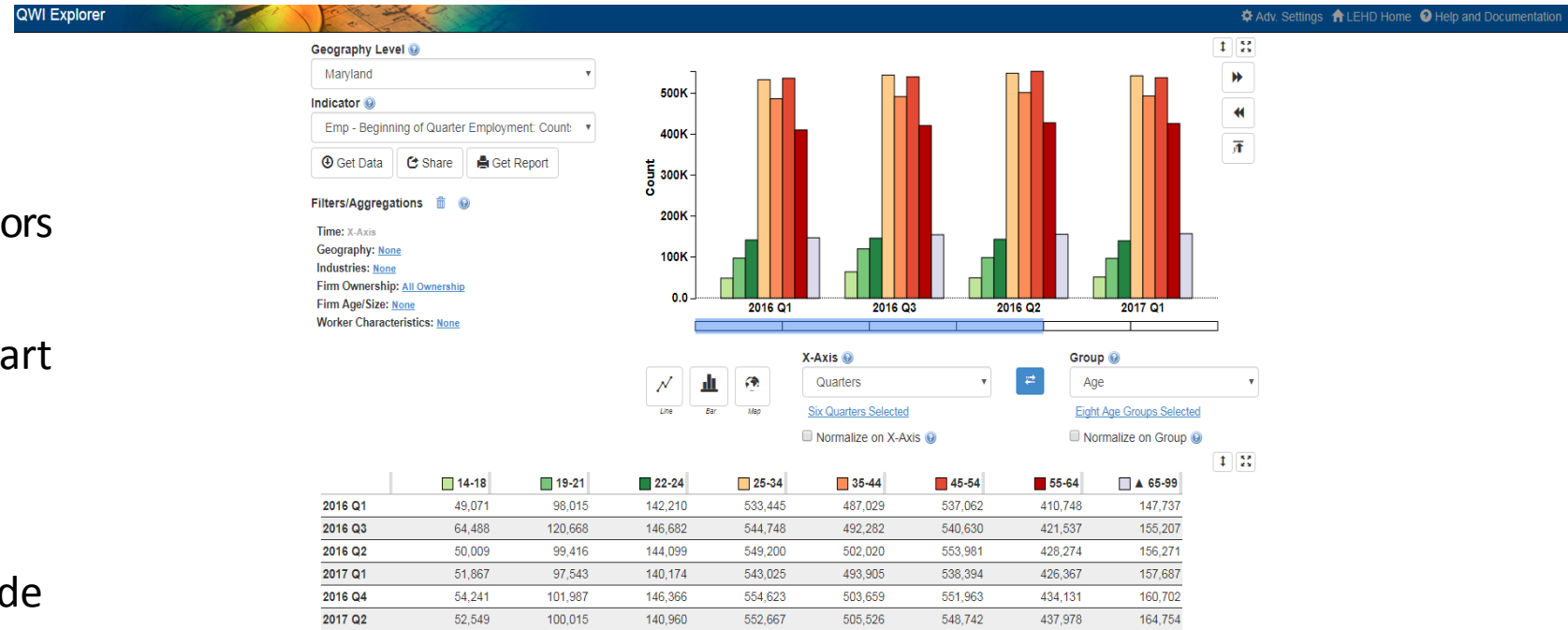
Census Geography Hierarchy



LEHD Public Data Tools

QWI Explorer

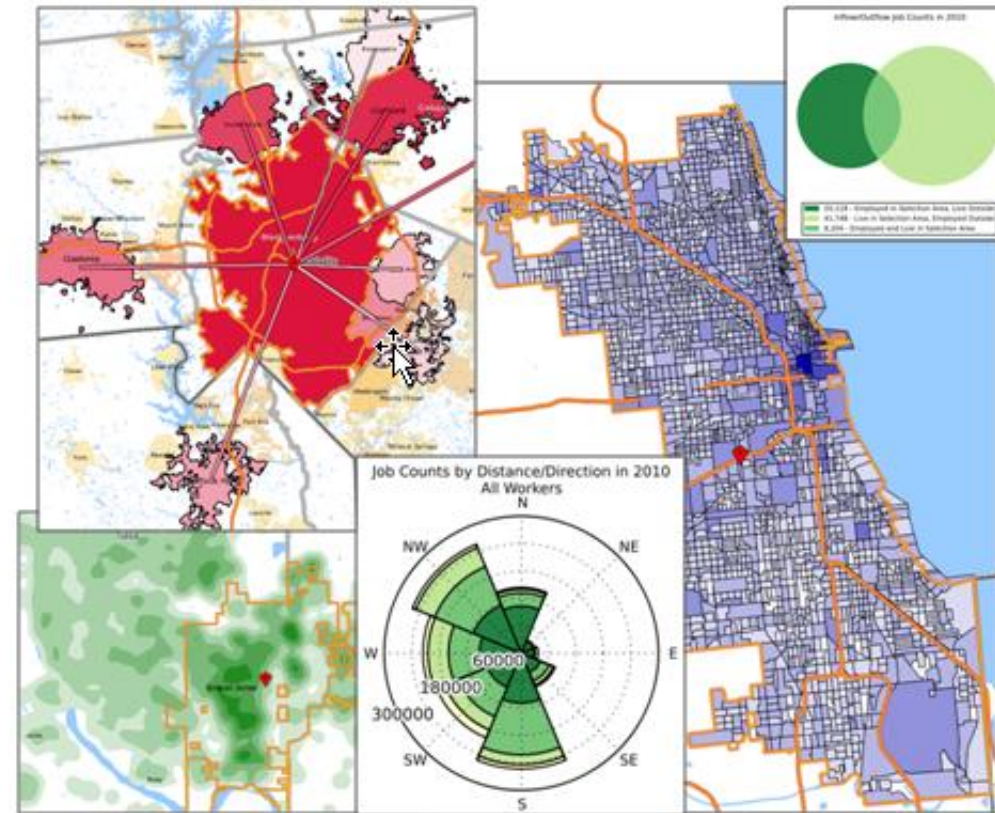
- ✓ 32 Quarterly Workforce Indicators
- ✓ Flexible Pivot Table and Map/Chart interface
- ✓ Data on detailed interactions between firms and workers include employment, employment change (individual and firm), and earnings
- ✓ Analyze/report by worker demographics: age, earnings, race, ethnicity, educational attainment, and sex



- ✓ Analyze/report by firm characteristics
 - ✓ NAICS classification (sector, 3, 4)
 - ✓ Firm age and firm size
- ✓ Quarterly data (9-12 months old)
- ✓ National and 50 states available (plus DC)

OnTheMap

- ✓ Where do workers live?
- ✓ Where do residents work?
- ✓ What are the commuter flows of a particular area?
- ✓ Analyze/report by worker demographics
 - ✓ Age, earnings, race, ethnicity, educational attainment, and sex
- ✓ Analyze/report by firm characteristics
 - ✓ NAICS Sector, firm age, and firm size



- ✓ 2002-2015 annual data
- ✓ 50 states available (plus DC)
- ✓ User-selected areas
- ✓ Based on Census Blocks
- ✓ Disclosure protection
- ✓ Flexible Inputs/Outputs

OnTheMap for Emergency Management



Hurricanes, Floods,
Winter Storms



Disaster Areas



Wildfires



Demographic &
Economic Data

OnTheMap for Emergency Management LEHD Home OnTheMap Help and Documentation

Disaster Declaration: DR-4166 Time Wed, 11 Jun 2014 16:00:02 GMT Export Share Close

Detail by: Characteristics Topic: 2010 Decennial Cou... Analysis Area: Event Area

Population by Age
Universe: Total Population Source: 2010 Census Source info >>

Characteristic	Count	Share
Total	1,755,475	100.00%
Under 18 years	416,870	23.75%
18 to 19 years	49,751	2.83%
20 to 24 years	116,069	6.61%
25 to 34 years	220,375	12.55%
35 to 49 years	353,573	20.14%
50 to 64 years	355,344	20.24%
65 years and over	243,493	13.87%

Population by Race
Population by Ethnicity
Population by Sex
Population by Housing
Housing Units

Universe: Housing Units
Source: 2010 Census Source info >>

Characteristic	Count	Share
Total	843,527	100.00%
Total of 'Universe: Vacant housing units'	161,607	19.16%

Total Population - Total per sq. mi. (Tracts)
0 - 6
7 - 44
45 - 297
298 - 1,992
1,993 - 13,319
Event Area
Basemap: Terrain

Privacy Policy | 2010 Census | Data Tools | Information Quality | Product Catalog | Contact Us | Home
Source: U.S. Census Bureau, Center for Economic Studies, LEHD | e-mail: CES.OnTheMap.Feedback@census.gov

New Public Data Service for Emergency Preparedness & Response

- Comprehensive Reports
- Real-time Data Updates
- Easy-to-use & Interoperable
- Historical Event Archive
- Flexible Analyses & Visualizations

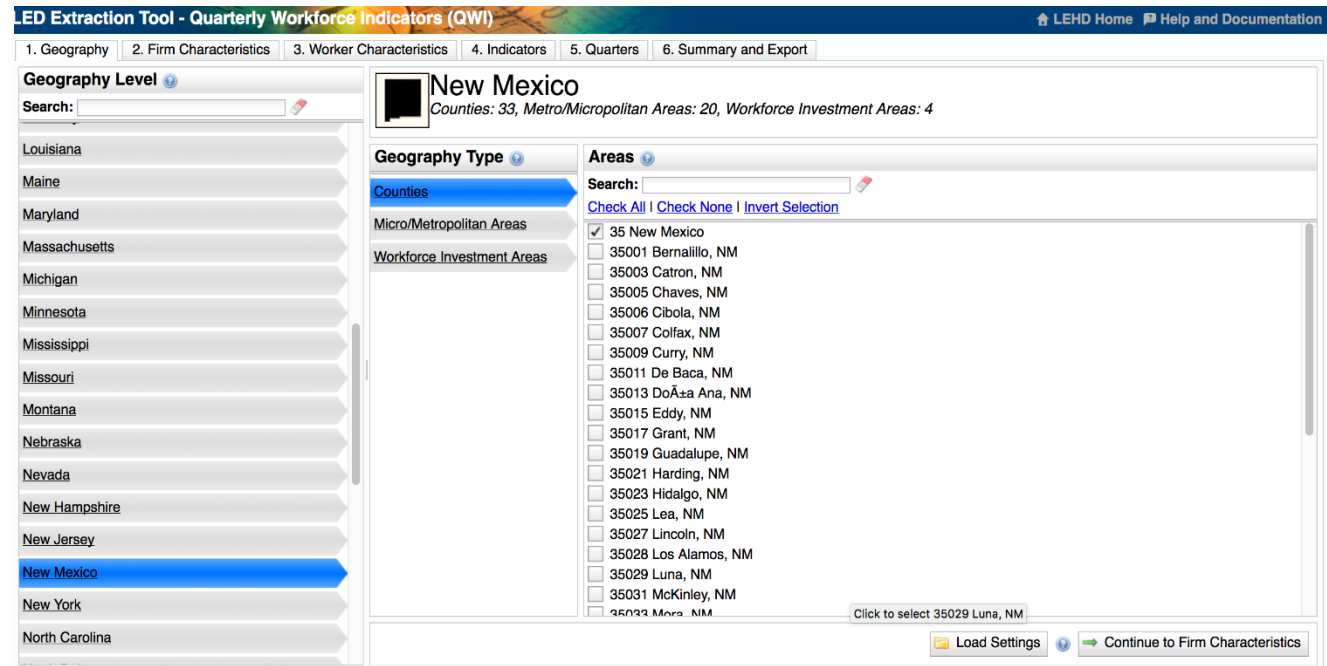


U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU
census.gov

([OnTheMapEM](#))

LED Extraction Tool

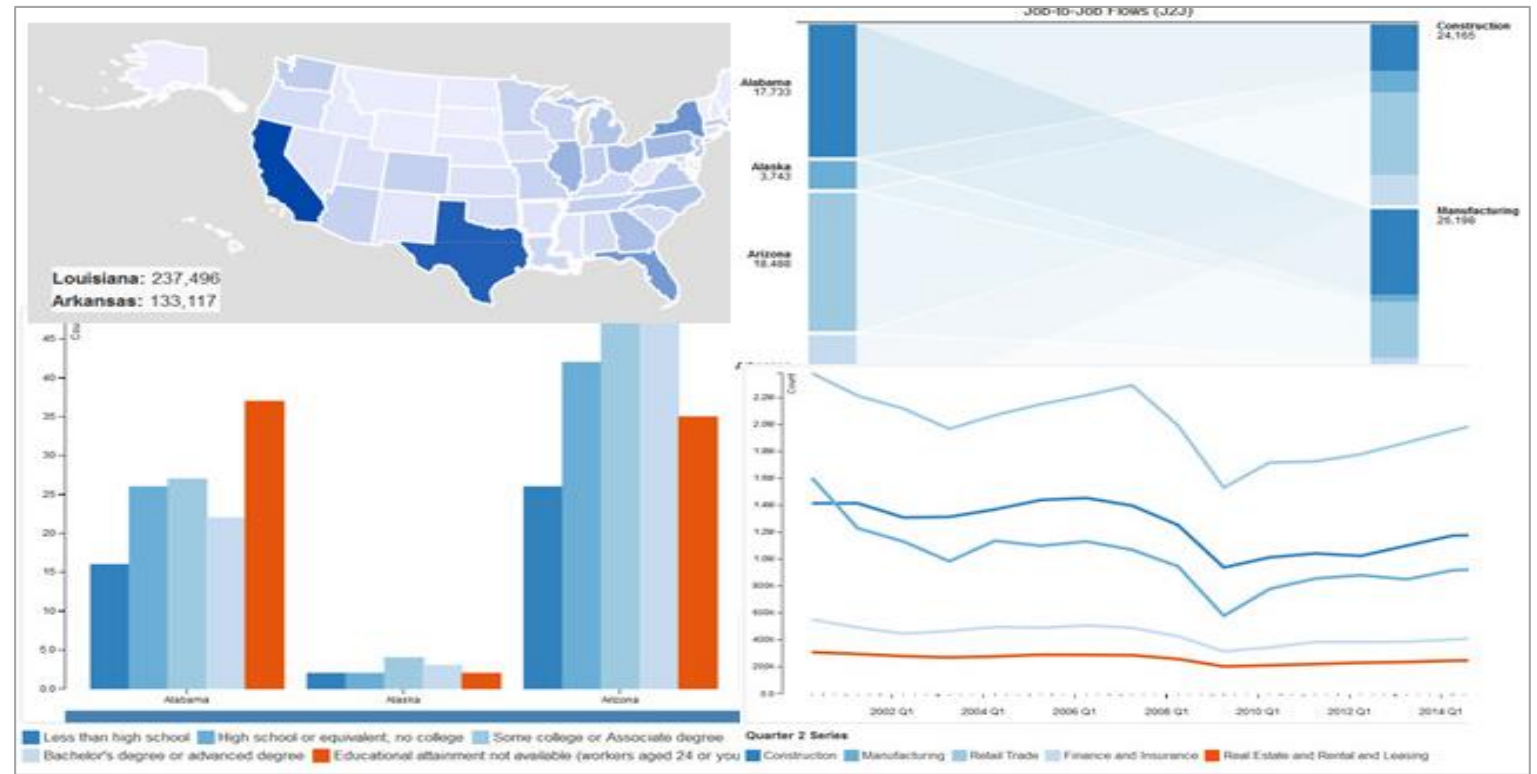
- ✓ Comprehensive QWI Data Coverage – Access 32 indicators, all available years/quarters, all firm/worker
- ✓ Characteristics, the Beta release of National QWI data, and all 50 states (plus the District of Columbia).
- ✓ Intuitive Interface – Streamlined interface walks users through the process of selecting the data they need and ignoring the data they don't. Complex and confusing choices are made invisible to the user by not allowing false combinations and graying-out unavailable options.



- ✓ Quick Results – Data queries are processed quickly through a sequential job queue, then CSV and/or ZIP files (complete with metadata) are available for download. All completed data queries from a user's current session are saved for easy access in a query results list.
- ✓ Easy-To-Use Documentation – Online documentation, including tutorials and walkthroughs

J2J Explorer (Beta)

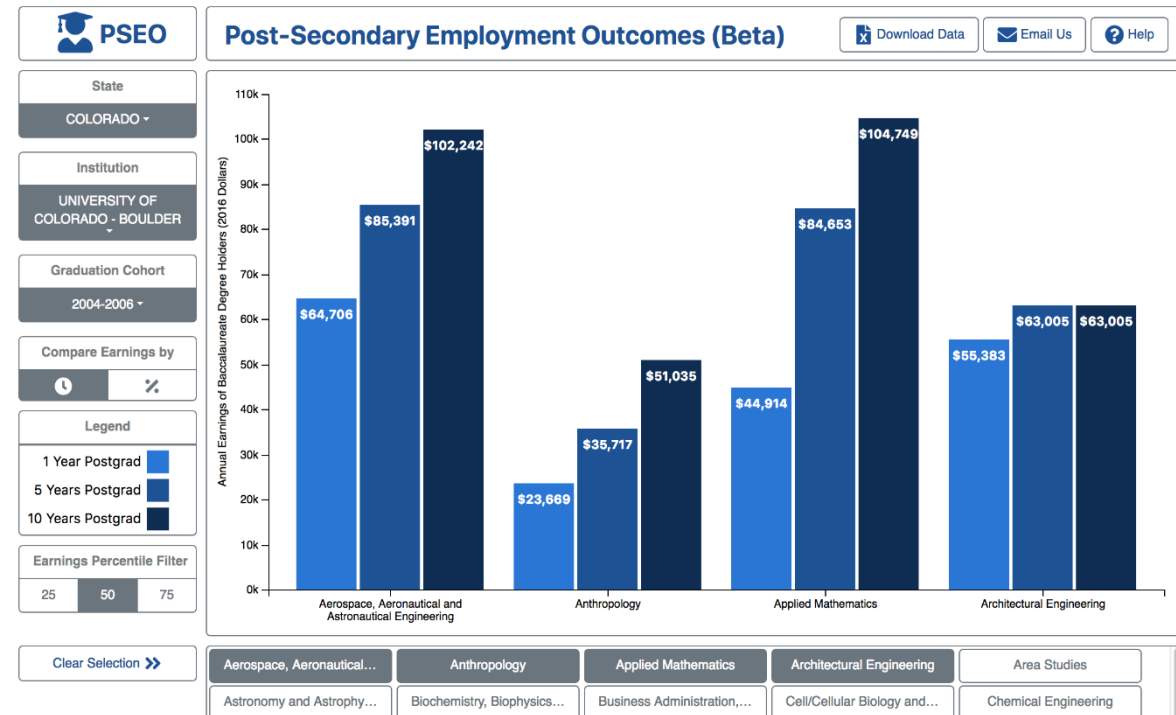
- ✓ 40 Measures of Worker Reallocation
- ✓ Six Visualization Modules with a flexible dashboard interface
- ✓ Export reports to Excel or CSV
- ✓ Trace worker movements through industries, geographic labor markets, and to/from employment
- ✓ Analyze/report by origin and destination at the national and state level



- ✓ Analyze/report by origin/destination firm characteristics, NAICS Sector, Firm age/firm size
- ✓ Analyze/report by worker demographics: age, earnings, race, ethnicity, educational attainment, and sex
- ✓ Data updated every quarter

Post-Secondary Employment Outcomes (PSEO) (Beta)

- ✓ Experimental tabulations
- ✓ Earnings and employment outcomes for college & university graduates by degree level, degree major, and post-secondary institution.
- ✓ State-of-the-art confidentiality protection mechanisms to protect the underlying data
- ✓ Data sharing partnerships between universities, university systems, State DOE, State Labor Market Information offices, and the U.S. Census Bureau
- ✓ Data are currently only available for post-graduate institutions whose transcript data has been made available to Census Bureau through a data-sharing agreement (Texas & Colorado)



Download Public-Use Data

Two classes of files for Graduate Earnings tabulations:

- ✓ Comprehensive dataset, which includes all institutions and crossings.
- ✓ Earnings for each system, which is a subset of the above release.

Choosing Among LED Data Products

What do you want?	Potential Drawbacks	Data Product
Employment, hires, separations, turnover, or earnings by detailed firm and person characteristics; quarterly time resolution; relatively short data lag	No geography below county; no residential information	QWI
Employment for detailed or customized geography; residential patterns of the workforce; relationship between worker employment and home locations	Annual time resolution; less detailed firm/person characteristics	LODES
Transitions between jobs by timing and firm or worker characteristics; transitions to/from nonemployment	No worker characteristics by firm characteristics (except geography), no geography below states	J2J

Choosing Among LED Data Access Points

Data Product	Explore the data, answer questions, or get visualizations	Bulk data for use in analysis process/software	Live queries for building web applications
QWI	QWI Explorer	LED Extraction Tool Raw data download	Census Bureau API
LODES	OnTheMap OnTheMap for Emergency Management	Raw data download	Future development
J2J	Job-to-Job Explorer	Raw data download	Future Development

Useful Links

- QWI Explorer
 - [Video Walkthrough](#)
 - [Example Scenarios](#)
- J2J Explorer
 - [Analysis Guides](#)
 - [FAQs](#)
- OnTheMap
 - [Getting Started](#)
 - [Analysis Guides](#)
 - [Other Tutorials](#)

Takeaways

- The LED Partnership provides unique workforce information and analysis tools at a relatively low cost
- LED data products can give insight into **local** and regional economies and labor markets
- LED's web tools provide free, 24/7 access to a basic analytical platform for the data

Stay Current

NEWSROOM



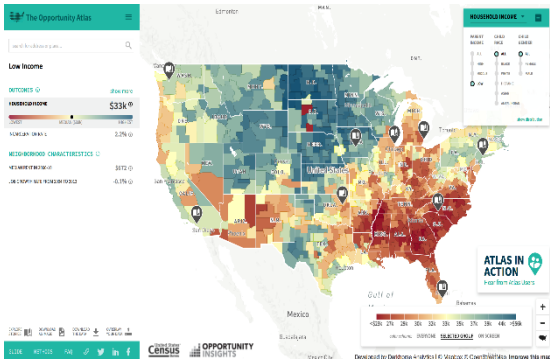
The latest news releases and statements from the U.S. Census Bureau. Also, find upcoming events, and useful information for media
[census.gov/newsroom.html](https://www.census.gov/newsroom.html)

DIRECTOR'S BLOG



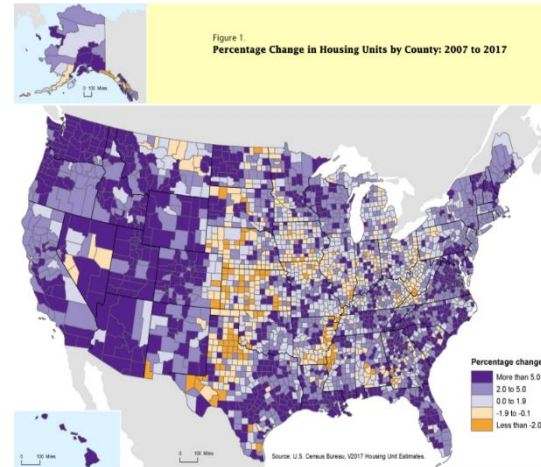
This blog gives the director's point of view on everything from Census Bureau news to how we measure America's people, places and economy.
[census.gov/newsroom/blogs/director.html](https://www.census.gov/newsroom/blogs/director.html)

AMERICA COUNTS



Featured stories on various topics such as families, housing, employment, business, education, the economy, emergency preparedness, and population
[census.gov/AmericaCounts](https://www.census.gov/AmericaCounts)

STATS FOR STORIES



Provides links to timely story ideas highlighting the Census Bureau's newsworthy statistics that relate to current events, observances, holidays, and anniversaries
[census.gov/newsroom/stories.html](https://www.census.gov/newsroom/stories.html)
[census.gov/newsroom/facts-for-features.html](https://www.census.gov/newsroom/facts-for-features.html)

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More information on the
American Community Survey:
<https://www.census.gov/acs>



Census (Non-media inquiries)
800-923-8282

Public Information Office (Media)
301-763-3030



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pinterest.com/uscensusbureau



linkedin.com/company/us-census-bureau

Additional Resources:

Want Free Training?

Need Local Stats?

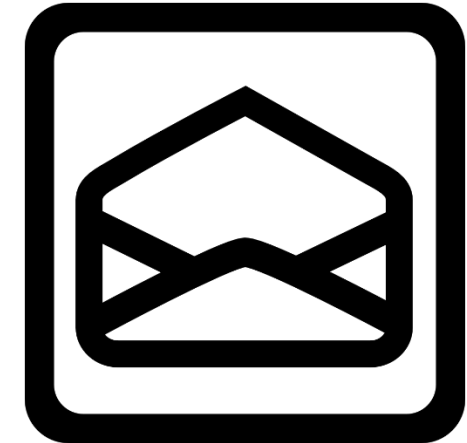


U.S. Census Bureau
Data Dissemination Specialist

Eric Coyle

(702) 236-3202

eric.a.coyle@census.gov



Additional Assistance:

Toll-free number:

1-844-ASK-DATA (1-844-275-2342)

census.askdata@census.gov

Q&A and Thank You!