Using Census Data for Transportation

October 25–27, 2011
Arnold and Mabel Beckman Center of the National Academies
Irvine, California

Supported by
AASHTO, Census Transportation Planning Products
Federal Highway Administration, Office of Planning
Federal Transit Administration

Census data are critical inputs for a host of transportation planning applications. They help us understand current conditions and predict future trends. They provide household, workplace, journey-to-work, and flow data for policy and planning studies, travel demand modeling, environmental justice analyses, transit evaluations, and many other work activities.

The conference planning team, working with FHWA, FTA, the U.S. Census Bureau, and the American Association of State Highway and Transportation Officials, has fashioned a strong program to provide participants with a forum to

- Share experiences on how census data are being used to meet decision-making needs;
- Discuss opportunities, limitations, and challenges associated with the transition from the census long form to the new American Community Survey; and
- Learn more about recent research to minimize the impacts of data suppression and assess alternative data sources, including QCEW and LEHD.

Breakout discussion sessions will also give participants the chance to talk about how transportation decision-making data needs are changing and what practical improvements and approaches are needed to meet longer-term needs for residence, workplace, and origin–destination flow data.

I urge you to share your experiences with your peers and identify ways to improve the data available for transportation products and services.

—Jonette Kreideweis, Conference Planning Team Chair

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**Conference Planning Committee**

- **Jonette Kreideweis**, Minnesota Department of Transportation (retired), *Chair*
- **Nathan Erlbaum**, New York State Department of Transportation
- **Thomas J. Kane**, Thomas J. Kane Consulting
- **Keith Killough**, Arizona Department of Transportation
- **Kathleen Lindquist**, Washington State Department of Transportation
- **Alan E. Pisarski**, Consultant
- **Steven E. Polzin**, University of South Florida
- **Kristen Rohanna**, San Diego Association of Governments
- **Guy Rousseau**, Atlanta Regional Commission
- **Robert L. Santos**, The Urban Institute

**Liaisons:**
- Ken Cervenka, Federal Transit Administration
- Elaine Murakami, Federal Highway Administration
- Penelope Weinberger, American Association of State Highway and Transportation Officials
- Alison K. Fields, U.S. Census Bureau

**TRB Staff**
- Tom M. Palmerlee
- Nanda Srinivasan
- Matthew A. Miller
- Jaclyn Hubersberger
Tuesday, October 25

11:00 a.m.–11:45 a.m., Boardroom
Planning Team Meeting (invitation only)

11:45 a.m.–12:45 p.m., Hyatt Regency Newport Beach Hotel, Lobby Entrance
Bus Shuttle Departures to Beckman Center
Bus 1–11:45 a.m.
Bus 2–12:00 noon
Bus 3–12:30 p.m.
Bus 4–12:45 p.m.

Noon–1:00 p.m., Dining Room and Dining Room Terrace
Lunch

1:00 p.m.–2:00 p.m., Auditorium
Opening Session
Jonette Kreideweis, Minnesota Department of Transportation (retired), presiding

Census Data in a Dynamic Time for Transportation Planning
Jonette Kreideweis, Minnesota Department of Transportation (retired)

Census Bureau Directions
Thomas L. Mesenbourg, Deputy Director, U.S. Census Bureau

2:00 p.m.–3:00 p.m., Auditorium
Data User and Provider Panel
Steven E. Polzin, University of South Florida, presiding

Thomas Mesenbourg will join a panel of data users to explore key issues relating to use of census data by the transportation community.

Transportation Agency Needs and Uses of Census Data: A Federal Perspective
Mary Lynn Tischer, Federal Highway Administration

State and MPO Data Needs: Meeting Federal Requirements and Local Applications
Martin Tuttle, California Department of Transportation

Broad View of Census Surveys for Reliable, High-Quality Data for Small Geographic Areas
Vincent Barabba, Chairman, Market Insight Corporation

Challenges and Opportunities in Meeting Transportation Data Needs—The Role of BTS
Patricia S. Hu, Associate Administrator and Director, RITA–BTS

Panel Discussion and Charge to Conference Participants

3:00 p.m.–3:30 p.m., Auditorium
Census Bureau Data Delivery and Research Activities
Jonette Kreideweis, Minnesota Department of Transportation (retired), presiding
Census Bureau Update
Alison Fields, U.S. Census Bureau

3:30 p.m.–4:00 p.m., Atrium
Break

4:00 p.m.–5:30 p.m., Auditorium
Environmental and Social Equity Issues
Penelope Weinberger, AASHTO, presiding

Using Performance Indicators to Monitoring Growth Vision Progress in Transit-Oriented Communities
Frank Wen, Southern California Association of Governments

Income, Race, and Odds of Living Along Busy Roadways: Using Census Data to Consider Equity and Environmental Justice in Regional Transportation Planning
Gregory Gould, Natural Resources Defense Council

Demographic Analysis of HOV and General Purpose Lane Use Along I-85 Corridor in Metro Atlanta
Adnan Sheikh, Sara Khoeini, Sundaram Vedala, Vetri Venthan Elango, and Randall Guensler, Georgia Institute of Technology

4:00 p.m.–5:30 p.m., Huntington
Demographic and Travel Forecasting
Thomas J. Kane, Thomas J. Kane Consulting, presiding

Use of ACS and Decennial Census Data Products in Demographic Forecasting Process at NCTCOG
Kathleen Yu, Behruz Paschai, and Arash Mirzaei, North Central Texas Council of Governments

Mara Kaminowitz, Baltimore Metropolitan Council

Using Census Data in Development of Activity-Based Model: The San Diego Experience
Wu Sun, Ziyang Ouyang, and Eddie Janowicz, San Diego Association of Governments

Floating Car Data and Travel Forecasting
Nick Cohn, TomTom

5:30 p.m.–6:00 p.m., Board Room
Planning Team Meeting (invitation only)

6:00 p.m.–7:30 p.m., Atrium
Reception

5:45 p.m.–7:45 p.m., Beckman Front Entrance
Bus Shuttle Departures to Hyatt Regency Newport Beach Hotel
Bus 1–5:45 p.m.
Bus 2–6:00 p.m.
Bus 3–7:30 p.m.
Bus 4–7:45 p.m.
Wednesday, October 26

7:15 a.m.–8:15 a.m., Hyatt Regency Newport Beach Hotel Lobby Entrance
Bus Shuttle Departures to Beckman Center
Bus 1–7:15 a.m.
Bus 2–7:30 a.m.
Bus 3–8:00 a.m.
Bus 4–8:15 a.m.

7:30 a.m.–8:30 a.m., Dining Room and Dining Room Terrace Breakfast

8:30 a.m.–10:00 a.m., Auditorium
Travel Modes: Transit, Bike, Walk
Ken Cervenka, Federal Transit Administration, presiding

Use of LED Data in Estimating Jobs Accessed Through Federal JARC Program
Caroline Ferris, TranSystems

Using LEHD Data to Assess Market Share of Commuter Rail Stations
Henning Eichler, Southern California Regional Rail Authority

Using Census Data to Identify Areas of High-Transit Propensity
Robert E. Bush, HDR Engineering

Sketch Planning Tool for Nonmotorized Travel
Ho-Ling Hwang, Oak Ridge National Laboratory

8:30 a.m.–10:00 a.m., Huntington
Data Synthesis and Evolving Tools
Keith L. Killough, Arizona Department of Transportation, presiding

Use of ACS PUMS Data in Demographic and Economic Forecasting
Dmitry Messen, Houston–Galveston Area Council

Integrated Transportation Land-Use Modeling: Using Publicly Available Data Sources for Advanced Modeling
Rolf Moeckel, PB Americas, Inc.

Population Synthesis for Travel Demand Modeling: Data Needs and Application Case Studies
Ram M. Pendyala, Arizona State University

10:00 a.m.–10:30 a.m., Atrium Break

10:30 a.m.–noon, Auditorium
People Move, Jobs Change: Transportation Impacts of Population Dynamics
Jennifer Toth, Arizona Department of Transportation, presiding
Changes in Racial–Ethnic Characteristics in California’s San Francisco Bay Area and United States
Harold M. Brazil, Shimon Israel, and Charles L. Purvis, Metropolitan Transportation Commission

Latino New Urbanism: Exploring Link Between Hispanic Mode Choice and Residential Location in Hispanic Neighborhoods
Evelyn Blumenberg and Madeline Wander, University of California, Los Angeles

Preview of Small Area Transportation Data from the American Community Survey
Edward J. Spar, COPAFS, and Ken Hodges, Nielsen Claritas

10:30 a.m.–noon, Huntington
How Far Can You Go in This Vehicle? Exploring the Utility and Limits of Census Data for Transportation Planning and Research
Robert Santos, The Urban Institute, presiding

Using 2007 License Plate Study to Evaluate Census Sensitivity Between Years 2000 and 2010
Sara Khoeini, Sundaram Vedala, Vetri Venthan Elango, and Randall Guensler, Georgia Institute of Technology

Socioeconomic Data Reconciliation Procedure in Maryland Statewide Transportation Model: Challenges, Current Solutions, and Future Steps
Sabyasachree Mishra, Fred Duca, and Xin Ye, University of Maryland, College Park; Subrat Mahapatra, Maryland State Highway Administration

Creating Land Use and Built Environment Variables in Buffers Surrounding Households: Accuracy of Geo-Coordinate Imputation
Xin Wang and Asad J. Khattak, Old Dominion University; Juyin Chen, Virginia Department of Transportation

Validation of Person-Trip Tables for Transit Forecasting
Jinghua Xu, Parsons Brinckerhoff Quade & Douglas, Inc.; Rosella Picado and Dawn McKinstry, PB Consult, Inc.

Noon–12:45 p.m., Dining Room and Dining Room Terrace
Lunch

12:45 p.m.–2:15 p.m., Auditorium
Research Activities
Elaine Murakami, Federal Highway Administration, presiding

Applying Statistical Disclosure Control to American Community Survey Microdata Before Generating CTPP Estimates
Tom Krenzke, Westat

Place-of-Work Allocation for Workers with Missing Employment Addresses in the ACS
Melanie Rapino and Brian McKenzie, U.S. Census Bureau

Evaluation of Data from QCEW and LEHD-OTM for Transportation Applications
Bruce D. Spear, Cambridge Systematics, Inc.

Research on ACS and Administrative Records
Ron S. Jarmin, U.S. Census Bureau

2:15 p.m.–2:45 p.m., Atrium
Break
Power Users’ Forum: Making Large Data Sets Useful and Usable for Transportation Agencies
Ed Christopher, Federal Highway Administration, presiding

Private sector representatives involved in the identification, application, and dissemination of census and other sociodemographic data for the support of transportation planning will share their insights on available and planned census and census-derived data products, alternative data sources, the state of the practice in transferring, extrapolating, and synthesizing sociodemographic and economic data, and client capabilities, needs, and aspirations regarding data.

Ken Hodges, Nielsen Claritas
Lynn Wombold, ESRI
Vincent Bernardin, Jr., Bernardin, Lochmueller and Associates, Inc.
Kevin Tierney

4:00 p.m.–5:30 p.m., Auditorium, Huntington, Boardroom, Newport Room, Executive Dining Room
Breakout Discussion Groups

To enhance participant interaction and synthesize conference findings, participants will select one of five breakout groups, which will meet twice (Wednesday afternoon and Thursday morning). Each breakout group will focus on different topic areas. During this session, each breakout group will (a) discuss their experience in using census data and identifying the value and importance of census data to transportation planning, and (b) identify the benefits and the challenges they foresee. A one-page summary from each group will be prepared and distributed before the Thursday breakout session.

A: Data Content Specification (Geographic Precision, Currency, Accuracy, Content), Auditorium
Ed Christopher, Federal Highway Administration, Leader
Kristen Rohanna, San Diego Association of Governments, Coleader

B: Integration with Other Sources and Private Sector Data, Huntington
Guy Rousseau, Atlanta Regional Commission, Leader
Nathan Erlbaum, New York State Department of Transportation, Coleader

C: Data Dissemination, Data Access Tools, Model, Boardroom
Keith Killough, Arizona Department of Transportation, Leader
Kathleen Lindquist, Washington State Department of Transportation, Coleader

D: Funding and Institutional Arrangements Relating to Census and Alternative Sources, Newport Room
Thomas J. Kane, Thomas J. Kane Consulting, Leader
Alan E. Pisarski, Consultant, Coleader

E: Research and Professional Development, Executive Dining Room
Elaine Murakami, Federal Highway Administration, Leader
Alison K. Fields, U.S. Census Bureau, Coleader

5:45 p.m.–6:40 p.m., Beckman Front Entrance
Bus Shuttle Departures to the Hyatt Regency Newport Beach Hotel
Bus 1–5:45 p.m.
Bus 2–6:00 p.m.
Bus 3–6:25 p.m.
Bus 4–6:40 p.m.
Thursday, October 27

7:15 a.m.–8:15 a.m., Hyatt Regency Newport Beach Hotel Lobby Entrance

Bus Shuttle Departures to Beckman Center
- Bus 1–7:15 a.m.
- Bus 2–7:30 a.m.
- Bus 3–8:00 a.m.
- Bus 4–8:15 a.m.

7:30 a.m.–8:30 a.m.

Breakfast

8:30 a.m.–10:30 a.m., Auditorium, Huntington, Boardroom, Newport Room, Executive Dining Room

Breakout Discussion Groups

Each breakout group will focus on a different topic, although there may be some overlap. This will be a forward-looking session, to discuss research and action items for both the short-term (less than 2 or 3 years) and the long-term (3 or more years) future of using census data for transportation planning.

A: Data Content Specification (Geographic Precision, Currency, Accuracy, Content), Auditorium
Ed Christopher, Federal Highway Administration, Leader
Kristen Rohanna, San Diego Association of Governments, Coleader

This group will focus on the technical and statistical characteristics of census data and products, including the CTPP special (or custom) tabulation and the standard ACS products, including tables and microdata samples (PUMS). Some of the topics may include data currency, accuracy and precision, use of disclosure avoidance methods as they relate to policy analysis, and planning and regulatory compliance.

B: Integration with Other Sources and Private Sector Data, Huntington
Guy Rousseau, Atlanta Regional Commission, Leader
Nathan Erlbaum, New York State Department of Transportation, Coleader

This group will focus on how census data are or could be integrated with other data sources from both the public and private sector. This could include combining census survey data such as ACS with administrative records, LEHD data, household travel surveys, location data from smartphones or other location-based data (e.g., BlueTooth and RFID). Issues related to standardization, consistent availability, and other obstacles to this integration will be discussed.

C: Data Dissemination, Data Access Tools, Model, Boardroom
Keith Killough, Arizona Department of Transportation, Leader
Kathleen Lindquist, Washington State Department of Transportation, Coleader

This group will examine how the census–ACS data are currently processed and potential processing improvements, including disclosure protection methods, updating employer referencing, estimating network travel distances, coding workplaces when insufficient address information is provided, and how the data are disseminated—particularly with web-based access tools such as American FactFinder, the CTPP Access Tool (using Beyond 2020), and BTS Bookstore.
D: Funding and Institutional Arrangements Relating to Census and Alternative Sources,  
Newport Room  
Thomas J. Kane, Thomas J. Kane Consulting, Leader  
Alan E. Pisarski, Consultant, Coleader  

This group will focus on approaches to ensure the continued availability data under current expectations of budget and staffing cuts. This will include the value and willingness to support different initiatives under funding constraints. For the 1990, 2000, and 2006–2010 CTPP, state DOTs and MPOs have funded the CTPP program as a coordinated pool, including data products and (more recently) research and technical assistance. Discussion will include how to determine stakeholder priorities, how to ensure stakeholder participation, and the value of census data compared with alternative data sources.

E: Research and Professional Development, Executive Dining Room  
Elaine Murakami, Federal Highway Administration, Leader  
Alison K. Fields, U.S. Census Bureau, Coleader  

This group will focus both on prioritizing research to ensure socio-demographic and economic data to support transportation planning and policy analysis, and on how to ensure a trained professional staff that can use these data effectively. While the research topic may overlap with groups A and B, this group will include discussion on research to support synthetic data methods. On the topic of professional development, the group will discuss improving communication about these data sources, techniques for knowledge transfer, and mechanisms and methods for training such as face-to-face training, webinars, and interactive e-learning systems.

10:30 a.m.–11:00 a.m., Atrium  
Break  

11:00 a.m.–12:30 p.m., Auditorium  
Closing Session: Improving Transportation Through Better Demographic Information  
Jonette Kreideweis, Minnesota Department of Transportation (retired), presiding  

Reports from Breakout Groups  
A: Data Content–Specification (Geographic Precision, Currency, Accuracy, Content)  
Ed Christopher, Federal Highway Administration, Leader  
Kristen Rohanna, San Diego Association of Governments, Coleader  

B: Integration with Other Sources and Private Sector Data  
Guy Rousseau, Atlanta Regional Commission, Leader  
Nathan Erlbaum, New York State Department of Transportation, Coleader  

C: Data Dissemination, Data Access Tools, and Models  
Keith Killough, Arizona Department of Transportation, Leader  
Kathleen Lindquist, Washington State Department of Transportation, Coleader  

D: Funding and Institutional Arrangements Relating to Census and Alternative Sources  
Thomas J. Kane, Thomas J. Kane Consulting, Leader  
Alan E. Pisarski, Consultant, Coleader  

E: Research and Professional Development  
Elaine Murakami, Federal Highway Administration, Leader  
Alison K. Fields, U.S. Census Bureau, Coleader
Observations
Steven E. Polzin, University of South Florida

Town Meeting on Priorities for Action

Summary Remarks
Jonette Kreideweis, Minnesota Department of Transportation, (retired)

12:30 p.m.–1:30 p.m., Dining Room and Dining Room Terrace
Lunch

12:30 p.m.–1:30 p.m., Executive Dining Room
Planning Committee Lunch

12:30 p.m.–2:15 p.m., Beckman Front Entrance
Bus Shuttle Departures to Hyatt Regency Newport Beach Hotel
and John Wayne International Airport
Bus 1–12:30 p.m.
Bus 2–1:30 p.m.
Bus 3–2:15 p.m.

Contacts
Jaclyn Hubersberger, jhubersberger@nas.edu, 202-334-3119
Tom Palmerlee, palmerlee@nas.edu, 202-334-2907

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