Webinar Agenda

- Welcome & Introductions – Melissa Savage, AASHTO
- Overview of CTPP – Shimon Israel, Metropolitan Transportation Commission
- Equity Module – Jennifer Murray, Wisconsin DOT
- Delaware Valley Regional Planning Commission Case Study – Shoshana Akins
- Questions
Established in 2001 in partnership with FHWA.

Goals:
- promote environmental stewardship
- encourage innovative ways to streamline the transportation delivery process.
- Serve as a resource for transportation professionals seeking technical assistance, training, information exchange, partnership-building opportunities, and quick and easy access to environmental tools
CEE Environmental Justice Community of Practice

- National EJ Peer Exchange on February 2016
- Webinar May 18, 2016 to share the focus areas developed by the peer exchange participants (350+ attendees)
- Practitioners Peer Exchange Environmental Justice Roadmap, released November, 2016
CEE Environmental Justice Community of Practice

- EJ Community of Practice series of webinars:
  - EJ Oversight
  - Meaningful Community Engagement
  - Guidance and Consistency of Analysis
  - Disproportionate Impact from Planning and Project Delivery

- Training Needs Assessment Survey 2019
  - Follow-up webinar with EJ CoP to discuss results and get feedback about future programming

- AMPO & AASHTO Workshop – AMPO Annual Meeting 2019

- EJ Virtual Peer Exchange (2020)
AASHTO Team Environment Contacts:

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- Melissa Savage: msavage@aashto.org
Shimon Israel, MTC
CTPP Board Member
January 27, 2020

AASHTO Center for Environmental Excellence and the Community of Practice for Environmental Justice
1. Explain CTPP
2. Available data and geographies
3. CTPP applications
4. Example application
Census Transportation Planning Products

- Journey-to-work asked since 1960
- Long form data 1970 through 2000
- Now ACS based
- Most recent datasets are 2006-10 and 2012-2016
- Data tabulated by:
  - Residence  (Part I)
  - Work       (Part II)
  - Flow       (Part III)
Some Key CTPP Data Items Include

- **Data on Households**
  - Size, income, vehicles per household
- **Data on Workers**
  - Age and gender, occupations, earnings
- **Data on Journey to Work**
  - Usual mode to work, commuting time, departure time to work
- **Data on Workplaces**
  - Work locations, times of arrival at work
- **Geographies**
  - Nation, state, county, place, PUMA, MSA, tract, TAD, TAZ
Applications of CTPP Data Products

- Travel modeling and forecasting
- Long range planning/TIP
- Performance measurement
- Modal share analysis
- FTA New Starts/Small Starts
- Policy impact analysis
- Livability analysis
- Corridor planning
- Air quality modeling
- Trend analyses
- Descriptive statistics
- Title VI
- Equity analyses
- Survey weighting and expansion
WELCOME TO THE CENSUS TRANSPORTATION PLANNING PRODUCTS PROGRAM (CTPP)

The CTPP is a State DOT-funded, cooperative program that produces special tabulations of American Community Survey (ACS) data that have enhanced value for transportation planning, analysis, and strategic direction. Additionally, the program provides universal access to that data, funds and conducts research, and provides training and technical assistance to the transportation planning community, all to increase understanding of the needs of the traveling public in support of policy and programming decision making.

Census data on demographic characteristics, home and work locations, and journey to work travel flows are key inputs to a variety of state, regional and local transportation policy and planning efforts. They also support corridor and project studies, environmental analyses and emergency operations management.

In 1990, 2000, 2006, and again in 2014, AASHTO partnered with all of the states to support the development of special census products and data tabulations for transportation. These census transportation data packages have proved invaluable in understanding characteristics about where people live and work, their journey to work commuting patterns and the modes they use for getting to work.

For the latest on CTPP data (2012-2016), click the icon below.
### A302100 - Total Workers (1) (Workers 16 years and over)

Current date: 5/14/2019 12:35:17 PM (Eastern Daylight Time)

U.S. Census Bureau, American Community Survey 2012-2016 5-year estimates. Special Tabulation: Census Transportation Planning Products Program

**FLOW:** State-PUMA5 -> POW State-Place

**Data set:** 2012-2016 (5-year)

**Selected Geography:**
- **RESIDENCE:** Bay PUMAs Without SF
- **WORKPLACE:** City of San Francisco

<table>
<thead>
<tr>
<th>RESIDENCE</th>
<th>WORKPLACE</th>
<th>Estimate</th>
<th>Margin of Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alameda County (North) E...</td>
<td>San Francisco city, Calif...</td>
<td>12,355</td>
<td>729</td>
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<tr>
<td>Alameda County (Northeast)</td>
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<td>San Francisco city, Calif...</td>
<td>16,215</td>
<td>831</td>
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<tr>
<td>Alameda County (North Cen...</td>
<td>San Francisco city, Calif...</td>
<td>7,220</td>
<td>654</td>
</tr>
<tr>
<td>Alameda County (West) S...</td>
<td>San Francisco city, Calif...</td>
<td>14,065</td>
<td>783</td>
</tr>
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<td>672</td>
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<td>Alameda County (East) L...</td>
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<td>Contra Costa County (Far ...</td>
<td>San Francisco city, Calif...</td>
<td>10,645</td>
<td>701</td>
</tr>
</tbody>
</table>
Example 1: Visualize Commuter Flows to San Francisco

Study Area

Total Workers
Example 1: Visualize Commuter Flows to San Francisco

Drive-Alone

Carpool

Transit
https://ctpp.transportation.org/

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Metropolitan Transportation Commission
(415) 778-5239
sisrael@bayareametro.gov
Census Transportation Planning Products Program – A Focus on Equity

Jennifer Murray AICP, WisDOT
CTPP Board Member
January 27, 2020

AASHTO Center for Environmental Excellence and the Community of Practice for Environmental Justice
CTPP… A Focus on Equity – Outreach Components

- **Website:** Update CTPP website to include equity
- **Data:** Update and emphasize CTPP products with focused tables displaying equity variables
- **Training:** Create things like an “Equity Module”
- **Other Resources:** Point to national subject matter experts
CTPP… A Focus on Equity – Website

https://ctpp.transportation.org/
CTPP… A Focus on Equity – Data and Analysis

https://ctpp.transportation.org/2012-2016-5-year-ctpp/
Remember--CTPP Data products has 3 parts

- Tabulations at Residence
- Tabulations at Workplace
- Flows between Home and Work

Over 55 Variables and 16 Universes

...and 194 Tables
## Table # | Tables ACS 2006-2010 | Tables ACS 2012-2016
--- | --- | ---
A101103 Hispanic Origin (3) (All Persons) | Hispanic origin (3) |
A101105 Minority Status (3) (All Persons) | Minority status (3) |
A104200 Poverty status (4) by Time leaving home (17) (Workers for whom poverty status is determined) | Poverty status (4) by Time leaving home (17) |
A104201 Poverty status (4) by Time leaving home (17) (Workers 16 years and over) | Poverty status (4) by Time leaving home (17) |
B102201 Minority Status (3) by Means of Transportation (11) (Workers 16 years and over) | Minority Status (3) by Means of Transportation (11) |
A103205 Vehicles available (6) by Length of US residence (6) (Workers 16 years and over in households) | Vehicles available (6) by Length of US residence (6) |
A104201 Vehicles available (6) by Poverty status (4) (Workers 16 years and over in households for whom poverty status is determined) | Vehicles available (6) by Poverty status (4) |
A202211 Minority Status (3) by Travel time (18) (Workers 16 years and over) | Minority status (3) |
B302105 Minority status (3) (Workers 16 years and over) | Minority status (3) |

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**Table Notes:**
- **A** = Standard ACS data
- **B** = CTPP Privacy Protected
- **CTPP Part Number** (either 1, 2 or 3)
- **CTPP Universe**, there are 16 different Universes
- **Crosstab indicator**, 1 = Univariate; 2 = Two-way; 3 = Three-way table
- **Sequential number** arbitrarily assigned

...and 40 more...or so... Tables
CTPP… A Focus on Equity – Outreach and Training

- CTPP Applications E-Learning Module
  - [http://ctpp.training.transportation.org/](http://ctpp.training.transportation.org/)
- Basic Transportation Analysis on CTPP web-based software (Tutorial videos)
  - [https://ctpp.transportation.org/training-resources/tutorial-videos/](https://ctpp.transportation.org/training-resources/tutorial-videos/)
- Census Transportation Data In-Person Training (Contact Penelope Weinberger at AASHTO)
Workers in Poverty Commuting to Santa Clara County
CTPP… A Focus on Equity – Additional Resources

• National Highway Institute
  • https://www.nhi.fhwa.dot.gov/
    - Fundamentals of EJ, EJ Instructor-led Training, Basics of Transportation Planning, Process, Public Involvement

• National Transit Institute
  • https://www.ntionline.com/courses/
    - Introduction to EJ, Advanced-level EJ Workshop summaries

• Publications
  • https://www.fhwa.dot.gov/hep/
    - Community Impact Assessment Guides, Shared Mobility, Changing Demographics in EJ Analysis, EJ Analysis in Planning and Programming, Developing Data, Models and Tools to Enhance Equity
https://ctpp.transportation.org/

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LEVERAGING CENSUS DATA FOR MPO EQUITY ANALYSES

SHOSHANA AKINS, MPH
Public Participation Planner
TRANSLATING REGULATIONS
UNDERSTANDING EQUITY REGULATIONS

EJ  TITLE VI

Low Income  Minority  Race
Color
National Origin

FHWA + FTA

Age  Sex  Disability  Limited English

Purpose:
Identify and address adverse human health or environmental effects

Purpose:
Prohibit discrimination

Image: DVRPC
## ALIGNING DVRPC ANALYSIS WITH REGULATIONS

<table>
<thead>
<tr>
<th>Indicator in IPD analysis update</th>
<th>ACS data table for indicator in IPD analysis</th>
<th>Community of concern indicator represents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Youth</td>
<td>B09001: Population Under 18 Years by Age</td>
<td>Age</td>
</tr>
<tr>
<td>Older Adults</td>
<td>S0101: Age and Sex</td>
<td>Age</td>
</tr>
<tr>
<td>Female</td>
<td>S0101: Age and Sex</td>
<td>Sex</td>
</tr>
<tr>
<td>Racial Minority</td>
<td>B02001: Race</td>
<td>Race and Minority</td>
</tr>
<tr>
<td>Ethnic Minority</td>
<td>B03002: Hispanic or Latino Origin by Race</td>
<td>Minority and National Origin</td>
</tr>
<tr>
<td>Foreign Born</td>
<td>B05012: Nativity in the United States</td>
<td>National Origin</td>
</tr>
<tr>
<td>Disabled</td>
<td>S1810: Disability Characteristics</td>
<td>Disability</td>
</tr>
<tr>
<td>Low-Income</td>
<td>S1701: Poverty Status in the Past 12 Months</td>
<td>Low-Income</td>
</tr>
</tbody>
</table>

Source: [https://www.dvrpc.org/webmaps/IPD/](https://www.dvrpc.org/webmaps/IPD/)
DVRPC’S EQUITY ANALYSIS

Source: https://www.dvrpc.org/webmaps/IPD/
DVRPC'S EQUITY ANALYSIS

Source: https://www.dvrpc.org/webmaps/IPD/
USING CTPP TO UNDERSTAND EQUITY IN PLANNING
EQUITY IN PLANNING

Purpose:
Identify and address adverse human health or environmental effects

Purpose:
Prohibit discrimination

Purpose:
Prohibit discrimination

Workplace and JTW

EJ

TITLE VI

Minority

Race

Color

National Origin

Low Income

FHWA

Age

Sex

Disability

Limited English

Health insurance

Air quality

Carless household

Cost of living

Asthma rates

Access to jobs

Obesity rates

Health insurance

Vacant properties

Bike lanes

Parks and open space

Commute length

Infrastructure quality

KSI rates

Crime

Vacant properties

Bike lanes

Parks and open space

Commute length

Infrastructure quality
EXPERIMENT #1
EQUITY AND WORKPLACE USING CTPP
CENSUS TRANSPORTATION PLANNING PRODUCTS (CTPP) EXPERIMENTATION

Workplace
- Minority (Race & Ethnicity)
- Foreign Born
- Limited English Proficiency
- Low Income (150% Poverty Rate)
- Carless Households

Journey-to-Work Flows
- Minority (Race & Ethnicity)
- Low Income (150% Poverty Rate)
FOREIGN BORN - RESIDENCE

Source: CTPP, 2006-2010 5-Year ACS Estimates
FOREIGN BORN - WORKPLACE

Source: CTPP, 2006-2010 5-Year ACS Estimates
EXPERIMENT #2
JOURNEY -TO-WORK FLOWS
DESIRE LINES - TOTAL FLOW (20+ WORKERS)

Source: CTPP, 2006-2010 5-Year ACS Estimates
EXPERIMENT #3
CRASH RATES AND COMMUNITIES OF CONCERN
## CRASH RATES AND COMMUNITIES OF CONCERN

<table>
<thead>
<tr>
<th></th>
<th>All KSI by Lane Miles</th>
<th>All KSI by AADT</th>
<th>VU KSI by Road Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RacialMin</strong></td>
<td>#</td>
<td>0.35</td>
<td>0.38</td>
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<tr>
<td><strong>EthnicMin</strong></td>
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<tr>
<td><strong>Disabled</strong></td>
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<td>0.33</td>
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<tr>
<td><strong>LowInc</strong></td>
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</tbody>
</table>

Source: [https://www.dvrpc.org/Reports/18022.pdf](https://www.dvrpc.org/Reports/18022.pdf)
CRASH RATES AND COMMUNITIES OF CONCERN

Source: https://www.dvrpc.org/Reports/18022.pdf
CRASH RATES AND COMMUNITIES OF CONCERN

Draft FY2019 TIP for PA

Layers

Indicators of Potential Disadvantage

CMP Corridors
Connections 2045 Centers
Freight Centers
SOON-TO-BE EXPERIMENT #4
TRAVEL PROFILES FROM PENNDOT
## TRAVEL PROFILES

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Variables</th>
<th>Geographic Level</th>
<th>Buffer Sizes</th>
<th>EJ/Non-EJ Population Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Means of transportation to work using ACS data</td>
<td>• Means of transportation to work by race/ethnicity and poverty status</td>
<td>• MPO planning region</td>
<td>N/A</td>
<td>• Percentage EJ population using each mode compared to percentage non-EJ</td>
</tr>
<tr>
<td>OnTheMap</td>
<td>• Job County by Distance/Direction</td>
<td>• MPO planning region</td>
<td>N/A</td>
<td>• Varies. May include number and percentage of low-wage workers, medium wage workers, high wage workers, and all workers</td>
</tr>
<tr>
<td>Jobs-worker ratio map</td>
<td>• Jobs as ratio of workers</td>
<td>• Block group</td>
<td>N/A</td>
<td>• Number of jobs in block group as a ratio of number of workers</td>
</tr>
<tr>
<td>Jobs-worker ratio map</td>
<td>• Low-wage jobs as ratio of low-wage workers</td>
<td></td>
<td></td>
<td>• Number of low-wage jobs in block group as a ratio of number of low-wage workers</td>
</tr>
<tr>
<td>Jobs-worker ratio distribution chart</td>
<td>• Jobs as ratio of workers</td>
<td>• Block group</td>
<td>N/A</td>
<td>• Primary: EJ and non-EJ population in block group intervals as percent of regional EJ and non-EJ population</td>
</tr>
<tr>
<td></td>
<td>• Low-wage jobs as ratio of low-wage workers</td>
<td></td>
<td></td>
<td>• Supplementary: Percent in block group intervals that is EJ and non-EJ with regional average indicated</td>
</tr>
<tr>
<td>Median commute distance map</td>
<td>• Median commute distance by all workers and by job wage categories</td>
<td>• Workers: Block groups in MPO planning region and Jobs: Block groups in State</td>
<td>N/A</td>
<td>• Median commute distance for all, low-wage, medium-wage, and high-wage workers</td>
</tr>
</tbody>
</table>

AND BIG THANKS TO THE TEAM!

KIM KOREJKO
BEN GRUSWITZ
ALISON HASTINGS

GESSELLE BABIARZ
CHRIS POLLARD

RESOURCES

DVRPC’s IPD Interactive Map: www.dvrpc.org/webmaps/IPD/

FHWA Title VI guidance: https://www.fhwa.dot.gov/civilrights/programs/tvi.cfm


CTPP Data: http://ctpp.transportation.org/Pages/5-Year-Data.aspx

IPD 2.0 METHODOLOGY: BINNING THE DATA

- A - well below average
- B - below average
- C - average
- D - above average
- E - well above average

Youth
Older Adults
Female
Racial Minority
Ethnic Minority
Foreign Born
Limited English Proficiency
Disabled
Low-income
IPD 2.0 METHODOLOGY: THE END RESULT OF BINNING THE DATA

Source: ACS 2011-2015 5-Year Estimates
EXPERIMENT #5: COMMUNICATE STATISTICAL SIGNIFICANCE
COMMUNICATE STATISTICAL SIGNIFICANCE

Older Adults

(A) 0 - 4.4%
(B) 4.4 - 11.1%
(C) 11.1 - 17.9%
(D) 17.9 - 24.7%
(E) 24.7 - 100%

Click a track to view similarity/disimilarity in the region.
COMMUNICATE STATISTICAL SIGNIFICANCE

Click a track to view similarity/disimilarity in the region.
COMMUNICATE STATISTICAL SIGNIFICANCE

Older Adults

(A) 0 - 4.4%
(B) 4.4 - 11.1%
(C) 11.1 - 17.9%
(D) 17.9 - 24.7%
(E) 24.7 - 100%

34021003800: 13.8%

Statistically different tracts (visible): 766 | Statistically similar tracts (invisible): 605