Midwest Travel Model Users Group

www.mtmug.org

MTMUG Update

May 2, 2018

CTPP Small Custom Geography Policy Change

- What: CTPP No Longer Including Traffic Analysis Zone (TAZ) and Transportation Analysis District (TAD) geographies.
- When: Following release of CTPP 2012-2016 dataset. Late 2018 to early 2019.
- Data will be in Standard Census Block Group Geography.
- Larger geographies such as tract, county, state, MSA will continue to be reported.
- More information at the link below:
- http://ctpp.transportation.org/Documents/CTPP%20Policy%20Change%20Announcement%20Final2_22.pdf

Why the change?

- Cost – the CB estimates the 2020 TAZ delineation program would exceed $2.5 million.
  - More than half the 5-year CTPP Budget.
- Non-standard geographies are more costly to tabulate than standard geographies.
- So you pay more for smaller geography but have lesser data quality.

Why the change?

- Usability concerns
  - TAZ data often does not match a models TAZs due to enhancements to the TAZ architecture.
- ACS-based tabulations have smaller sample sizes than decennial based.
- Smaller sample size has increased margins of error.
- Smaller geographies = decrease in data quality.
- Introducing non-standard census geographies further diminishes data quality
  - Population distribution and sample distribution has greater variation than standard geographies
  - ++ standard geographies will result in a lower sample error than current TAZ geography

How to Prepare for the Change

- Get involved in the 2020 Census PSAP. Participant Statistical Areas Program.
- PSAP occurs in the lead-in period to the decennial census.
- Allows you to adjust census block group boundaries to better align with existing TAZ geography.
  - Also census tracts, census designated places, census county divisions and various tribal geographies.
- PSAP Guidelines were published in the Federal Register February 15, 2018.
  - https://www.federalregister.gov/documents/2018/02/15
- Contact the State Data Center and let them know you are interested in participating with the PSAP. Gary Krob gary.krob@lib.state.ia.us

How to Prepare for the Change

- Contact the Census Bureau to let them know you want to participate in the 2020 PSAP and ask for information on who traditionally has participated in previous PSAPs in your area. Contact geo.psap@census.gov.
- Reach out to traditional PSAP participants and let them know you want to play a role in this cycle.
- Conduct an initial assessment of how your model TAZs and block groups do and do not align.
- Think through your agency's travel model geography needs and how you would like PSAP to meet those needs.
- Read through the initial guidance below on aligning block groups to model TAZ boundaries through PSAP.
  - http://ctpp.transportation.org/Pages/Policy-Change-on-Small-Geography.aspx

Infogroup

- IWD ES202 Pre 2011
- Infogroup Since 2011
  - IWD Confidentiality Issues
  - Systems Planning Purchase
  - Enterprise License last 3 years (OCIO)
    - Desire to have more State Agencies use (limited success)
    - Termination of Enterprise License
    - Do we continue with IG?? $26,000
    - New ISMS Based Parcel Data Trip Generation
    - Can use IG for trip attraction validation
    - Can use IWD also (cheaper!) $2,400

ISMS Progress

- Manual
  - Several iterations of the document.
  - Considered Stakeholder input.
  - Finalizing last edits.
  - Posted to Systems Planning website in near future.
    - ISMS Section
- Prototype Code
  - Ironing out last wrinkles in the GISDK code.
  - Final Code should be ready next week.
- Implementation
  - Currently working to phase in implementation of ISMS into MPO models.
    - INRCOG Waterloo/Cedar Falls MPO
    - Des Moines MPO
    - Corridor Cedar Rapids MPO
    - Ames MPO

Iowa's Model Structure

- 3 and 4 step models are appropriate for Iowa
  - No need for Activity Based Models or Hybrid Models
    - And they are much more costly to build and maintain
  - Comparatively Iowa does not have that much congestion
  - Right move to make Iowa's models more detailed and enhance components like Trip Generation and Trip Distribution (destination choice).
  - Standardized Architecture is a major benefit
    - Defensible, standardized, some cutting edge components
  - Take advantage of passive OD data (Streetlight)
  - Model runtime is still reasonable comparatively
  - Challenge to MPOs to find additional unique uses for the TDM
  - SHARE those projects with our peer MPOs. MTMUG great venue for that.

Potential Application of TDM for Transportation Planning

- Travel Demand Models are very useful tools that can provide information for a variety of transportation planning activities.
- Travel Demand Models take a significant amount of investment in human capital and financial means.
- It is in our own best interest to leverage these tools in more ways than we have in the past.
  - Project Development (Corridor Studies and IJR Analysis are common).
  - Project Identification and Prioritization (limited historically but highly desired).
- The potential application of the travel demand model is vast and open for exploration.

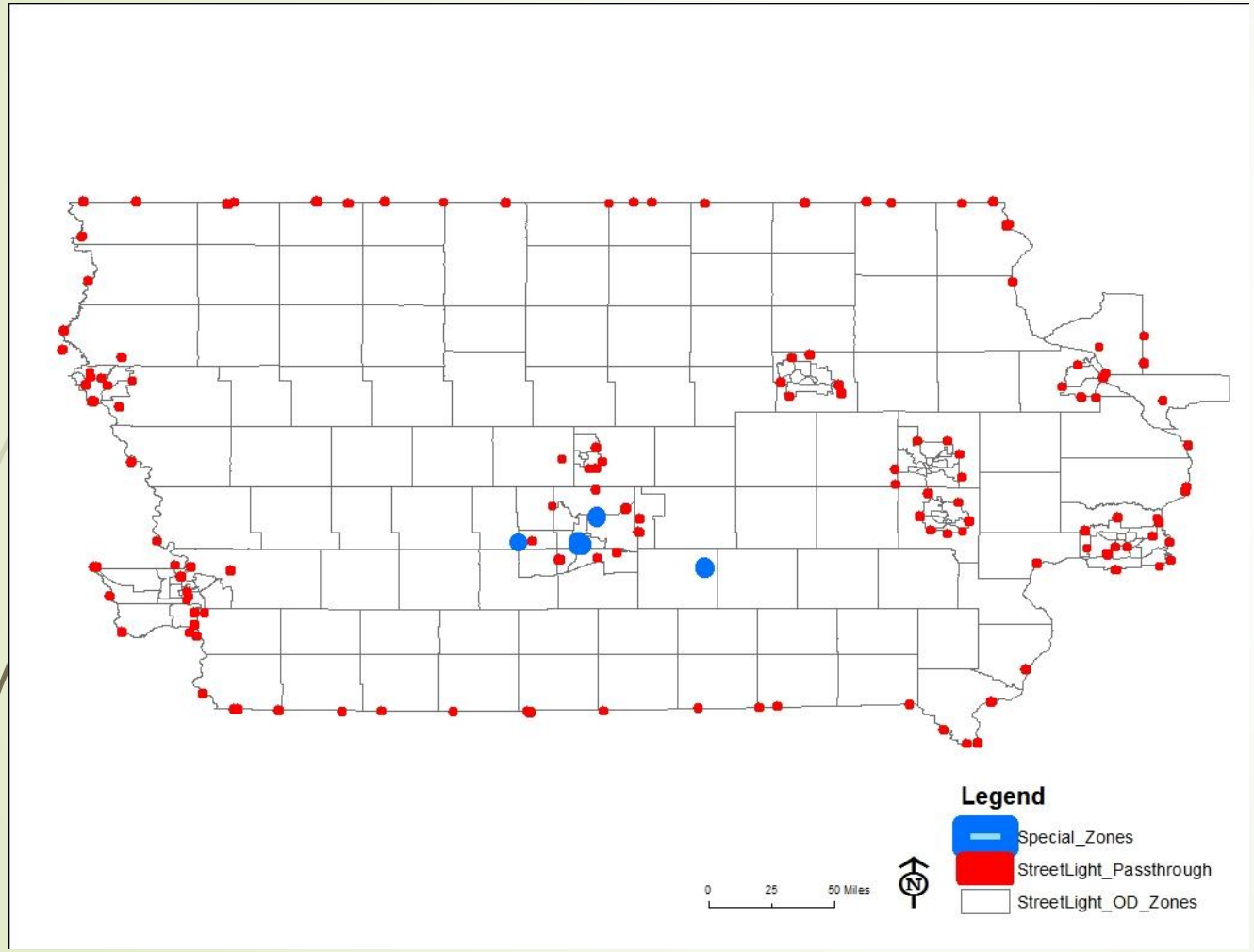
Examples of TDM Application for Transportation Planning

- Performance Measures
- Evaluation of Transportation Policy Decisions
  - Tolling, Congestion Pricing
- Air Quality Conformity
- Precursor to Mesoscopic or Microscopic Traffic Simulation (TransModeler)
- Corridor and Subarea Analysis
- Freight Studies
- Transit Studies
- TIP and LRTP
- External vs Internal Travel Analysis
- Effects of Land Use Changes

StreetLight Data

- Origin-Destination (OD) data based on passive data from cellular phone, Bluetooth, GPS, and location based services (LBS)
- Data via INRIX contract
- Acquire data via the StreetLight website and data portal
- Data available beginning in CY2016
  - TOD, DOW, Average Day,…etc.
  - Vehicle class: personal vehicle and trucks (medium and heavy)
  - Trip purpose: Home and Work analysis
- For more info: https://www.streetlightdata.com/

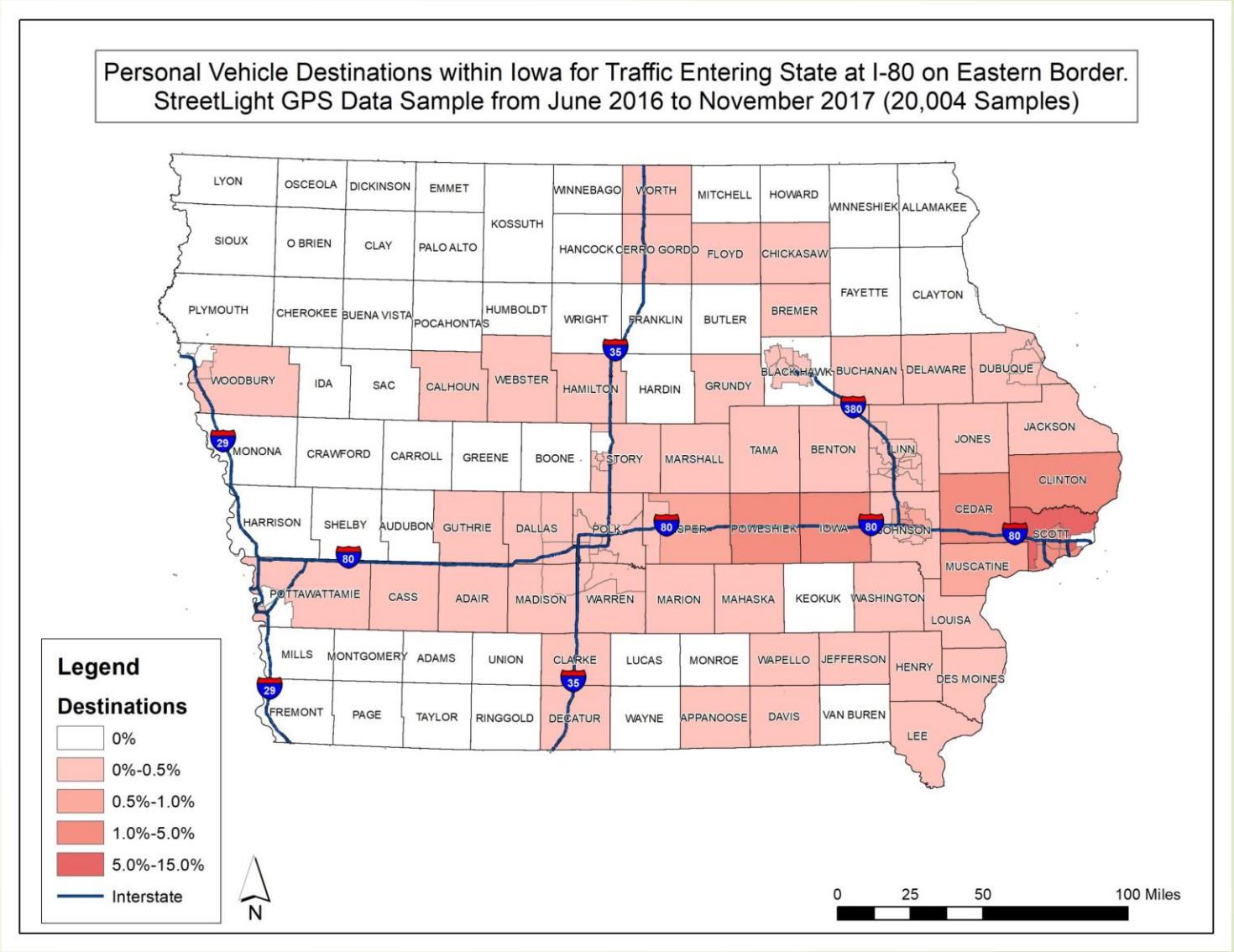
StreetLight Data



- 130 pass-through zones outside of Iowa
- 98 counties (Polk county represented by MPO zones)
- 87 MPO zones
- 130 MPO E-E external station pass-through zones
- 4 airports
- 1 park and ride (P&R) site
- 450 total zones

StreetLight Data

- Uses
  - Support TDM external travel analysis (MPO and Statewide model)
    - Out-of-State Travel
  - 'Estimated Actual' traffic
  - Airport trips
  - P&R trips



RAMS

- Roadway Asset Management System (RAMS)
- Iowa DOT Linear Referencing System built using ESRI Roads and Highways
- Transportation Data Server (TDS) Application Manager by Transcend Spatial
  - Internal to DOT staff: http://rams.dot.int.lan/tds/apps/app-mgr/#/apps
  - Externally available? That's the plan
- No tables with fields – each field an event layer (table)
- REST service
  - Event Layers available
    - https://gis.iowadot.gov/ramsa/rest/services/lrs/MapServer
    - Overlay Route Events – Linear Referencing, ArcToolbox (limited to two events at a time)
  - OSP and R&A staff to work with Iowa DOT GIS team to establish standard datasets

RAMS

- Segment Analyzer (Linear Overlay) Overview
  - Intersection Data
  - Traffic Message Channel (TMC) – include INRIX/NPMRDS travel time data
- Automate RAMS data updates in the future (Route measures and ROUTEID)
- Other
  - Traffic Count data via TRADAS, soon to be Jackalope (http://hdtraf.com/jackalope/)
    - Data stored in Oracle Spatial
    - SQL script established to report actual count locations for Iowa Counties per ISMS
    - Geometry in node format and stacked at the intersection. GISDK process to offset the location based on coordinate and intersection leg data
    - Long term goal: coordinate the intersection and traffic count data