



CTPP ACS
NPPARDS
LODES
NHTS

The Alphabet Soup of Planning and Performance Data

Breaking News

- AASHTO Data Management and Analytics Committee
 - CRC
 - Agility and Streamlining
 - Working Group
 - Initiatives
 - Core Data Principles
 - Data Self Assessments and Business Plans
 - Data “Green Book”

Performance Data

- [NPMRDS](#)
- [HPMS](#)

Planning Data

- CTPP
- ACS
- LODES
- IPUMS
- NHTS
- [GTFS](#) – [NTD](#)
- [FMIP](#)
 - CFS
 - FAF
- [CMAQ](#)
- [PlanWorks](#)
- [HEPGIS](#)

Operations Data

- [ITS](#)
- [ATIS](#)
- [HEPGIS](#)
- [SHRP2](#)
- Probe data

Performance Measures in MAP 21

- Establishes national performance goals for the Federal-aid highway program in seven areas:

Goal area	National goal
Safety	To achieve a significant reduction in traffic fatalities and serious injuries on all public roads
Infrastructure condition	To maintain the highway infrastructure asset system in a state of good repair
Congestion reduction	To achieve a significant reduction in congestion on the National Highway System
System reliability	To improve the efficiency of the surface transportation system
Freight movement and economic vitality	To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development
Environmental sustainability	To enhance the performance of the transportation system while protecting and enhancing the natural environment
Reduced project delivery delays	To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices

PM3 Final Rule

- 6 measures. 4 based on travel time data sets
 - Subpart E – NHS Performance •
 - Percent of person-miles that are reliable •
 - Interstate & non-interstate separate; LOTTR •
 - Percent change in CO2 Emissions compared to 2017
 - Annual Total Tailpipe CO2 emissions
 - Subpart F – Freight Movement •
 - Truck Travel Time Reliability Index •
 - Interstate only; TTTR
 - Subpart G – CMAQ Traffic Congestion •
 - Annual Hours of Peak-Hour Excessive Delay per Capita
 - Total Peak-Hour Excessive Delay person-hours •
 - Percent of Non-SOV Travel

National Highway Performance Program

- Level of Travel Time Reliability (LOTTR), defined as the ratio of the 80th percentile travel time to a “normal” travel time (50th percentile). Data are derived from the travel time data set using either the National Performance Management Research Data Set (NPMRDS) or equivalent.
- Truck Travel Time Reliability (TTTR) Index (the Freight Reliability measure). The measure also uses the Travel Time Data Set of NPRMDS, but unlike the LOTTR which uses a threshold to determine reliability, TTTR Index is expressed as an average for the entire applicable area

CMAQ

- (1) Annual Hours of Peak-Hour Excessive Delay Per Capita (the PHED measure); and
- (2) Percent of Non-SOV Travel.

Data for these two measures are derived from the travel time data set of NPMRDS.

What is the NPMRDS

- Archived, vehicle probe based, speed and travel time data set that covers the NHS
 - And additional roadways near 26 key border crossings
 - Includes location referencing data
- Three data sets
 - Passenger Vehicles
 - Trucks
 - Both
- Updated Monthly

- Calculated speeds and travel times for 400,000 road segments
- Every five minutes
- Every day
- Based on actual reported data
 - No imputation
- Can be downloaded in 5 or 15* minute intervals (or 10, 30, 60)

Changes

- New provider
- Sample size/density indicator
- Includes null epochs
- Completeness commitments
- TMC path and NHS segment conflation
- Separate travel times on internal and external TMC paths

How do I get the NPMRDS?

- Available to Federal Agencies, DOTs, MPOs, Authorized organizations, approved contractors
- Data Sharing Agreement required
- Data portal
- Massive Data Downloader

Planning Data

- [CTPP](#)
- [ACS](#)
- [LODES](#)
- [IPUMS](#)
- [NHTS](#)

NHTS

- USDOT
- 2016, 2009, 2001, 1995, 1990, '83, '77, '69
- Daily travel, 24 hour trip diary, all travel
- 2016 – 129,000 Households
- Trip time of day, length, purpose, mode
- Used for
 - Trend/change analysis in travel characteristics
 - Demographic analysis

IPUMS

- Microdata records from 1820 – 2015
- Uses 1 and 5 year ACS data
- IPUMS provides census and survey data from around the world integrated across time and space. IPUMS integration and documentation makes it easy to study change, conduct comparative research, merge information across data types, and analyze individuals within family and community context.
- A ton of data, really

LODES

- Local Employer-Household Dynamic (LEHD)
Origin Destination Employment Statistics
- Age, Earnings, Industry, Sex, Race Ethnicity,
Education; Firm age and size, Ownership, Job
Dominance and Job Type
- QCEW, UI Wage Records, and OPM for Federal
employees
- OnTheMap

CTPP

- Special tabulation of ACS
- Includes flow data at small geographies
- Used for validating travel models
- Good for demographic analysis

ACS

- US Census
- Replaced decennial “long form”
- 1, ~~(3,)~~5 year data

Thank you

Penelope Weinberger

Transportation Data Program Manager

AASHTO

pweinberger@aaashto.org

202-624-3556