

**README for “Highway Performance Monitoring System (HPMS) 2006-present” dataset.**  
U.S. Department of Transportation (USDOT), Federal Highway Administration (FHWA); Bureau of  
Transportation Statistics (BTS)  
2021-02-11

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**LINKS TO DATASET**

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A. Dataset archive link:

<https://doi.org/10.21949/1520767>

B. HPMS Field Manual link:

<https://doi.org/10.21949/1519108>

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**SUMMARY OF DATASET**

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The Highway Performance Monitoring System (HPMS) 2006-Present dataset is from the Federal Highway Administration (FHWA), and part of U.S. Department of Transportation (USDOT) / Bureau of Transportation Statistics' (BTS') National Transportation Atlas Database (NTAD). FHWA released this dataset as the latest version of HPMS which represents the highway system as of the 2019 calendar year. The Highway Performance Monitoring System (HPMS) provides data that reflects the extent, use, condition, and performance of the public roads in the United States. It consists of the All Road Network of Linear Referenced Data (ARNOLD) geometry and the Section Data which is the attribution. ARNOLD and Sections are linked through linear referencing and are part of the HPMS data program. This data is analytical for the purpose of supporting transportation program, funding and policy decisions at a national level. Operational applications such as navigation and routing may take advantage of HPMS with the understanding that it represents the average and not “real-time” of the system.

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## A. GENERAL INFORMATION

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0. Title of Dataset:

Highway Performance Monitoring System (HPMS) 2006-Present [datasets]

1. Description of Dataset:

The Highway Performance Monitoring System (HPMS) dataset is from the Federal Highway Administration (FHWA), and part of U.S. Department of Transportation (USDOT) / Bureau of Transportation Statistics' (BTS') National Transportation Atlas Database (NTAD). FHWA released this dataset as the latest version of HPMS which represents the highway system as of the 2019 calendar year. The Highway Performance Monitoring System (HPMS) provides data that reflects the extent, use, condition, and performance of the public roads in the United States. It consists of the All Road Network of Linear Referenced Data (ARNOLD) geometry and the Section Data which is the attribution. ARNOLD and Sections are linked through linear referencing and are part of the HPMS data program. This data is analytical for the purpose of supporting transportation program, funding and policy decisions at a national level. Operational applications such as navigation and routing may take advantage of HPMS with the understanding that it represents the average and not “real-time” of the system.

2. Dataset archive link:

<https://doi.org/10.21949/1519108>, <https://doi.org/10.21949/1520767>

3. Authorship Information:

Principal Data Creator or Data Manager Contact Information

Institution: U.S. Department of Transportation, Federal Highway Administration (FHWA)

Address: 1200 New Jersey Ave SE, Washington D.C. 20590

Email: ExecSecretariat.FHWA@dot.gov

Data Distributor Contact Information

Name: National Transportation Atlas Database (NTAD)

Institution: U.S. Department of Transportation, Bureau of Transportation Statistics (BTS), The Office of Spatial Analysis and Visualization (OSAV)

Address: 1200 New Jersey Ave. SE, Washington D.C. 20590

Email: ntad@dot.gov

4. Date of data collection and update interval:

Annually

5. Geographic location of data collection:

The Highway Performance Monitoring System (HPMS) provides data that reflects the extent, use, condition, and performance of the public roads in the United States.

6. Information about funding sources that supported the collection of the data:

U.S. Department of Transportation, Federal Highway Administration (FHWA)

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## B. SHARING/ACCESS & POLICIES INFORMATION

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### 0. Recommended citation for the data:

U.S. Department of Transportation, Federal Highway Administration; Bureau of Transportation Statistics (BTS) [distributor]. (2021). Highway Performance Monitoring System (HPMS) 2006-Present [datasets]. <https://doi.org/10.21949/1519108>, <https://doi.org/10.21949/1520767>

### 1. Licenses/restrictions placed on the data:

These data are in the Public Domain.

### 2. Was data derived from another source?:

Yes. The Highway Performance Monitoring System (HPMS) data originates at the state level. FHWA receives processes, analyzes, disseminates and uses information provided by the States through HPMS.

3. This dataset and its documentation was created and shared to meet the requirements enumerated in the U.S. Federally-Funded Scientific Research" Version 1.1 << <https://doi.org/10.21949/1520559> >> and guidelines suggested by the DOT Public Access website << <https://doi.org/10.21949/1503647> >>, in effect and current as of December 03, 2020.

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## C. DATA & RELATED FILE OVERVIEW

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### 1. File List for the bts\_NTAD\_HPMS\_Data\_Package.zip collection

#### A. Filename:

bts\_HPMS\_DMP\_20210211.pdf

#### Short description:

A PDF file containing the Data Management Plan that was created for current and future management of the data and associated files.

#### B. Filename:

bts\_HPMS\_20210211\_README.txt

#### Short description:

The README.txt file that includes human-readable information about the data, variable definitions, contact information, and other contextual information. The file you are reading now.

2. File List for the HPMS\_XXXX.zip collection. Posted are the archived shapefiles, classified by vintage year (\_XXXX). Datasets will be archived as they become available.

#### A. Filename:

hpms.shp

#### Short description:

A shapefile containing the geospatial data for Highway Performance Monitoring System (HPMS) 2006-Present dataset. This includes associated files with extensions .prj, .dbf, .sbn, .sbx, .shx.

B. Filename:

hpms.txt or hpms.shp

Short description:

A text file containing key metadata and documentation information such as methodology, procedures, data dictionary, etc.

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## D. METHODOLOGICAL INFORMATION

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1. Description of methods used for collection/generation of data:

The Highway Performance Modeling System (HPMS) 2006-Present data were collected through the states. FHWA receives processes, analyzes, disseminates and uses information provided by the States through HPMS. The data States provide through HPMS are considered their data, not FHWA's. The quality and integrity of these data rest with the States and are dependent on their processes and procedures used to collect and create the basic data inputs. Subsequent errors that are detected will be passed back to the State DOT for investigation and if confirmed, will be corrected in the following HPMS cycle. FHWA headquarters provides an overall coordination role in the HPMS process. The information portrayed in the Highway Statistics tables represent the official calculations for national Extent, Condition and performance data and are compiled by enterprise database methodologies. Reporting standards are set out in the HPMS Field Manual and reporting software has been developed and provided to the States via the User Profile and Access Control System (UPACS). Technical assistance, guidance and training are regularly provided to Division Offices and the States, and data are reviewed against prior year reports, normative trends and other States to identify possible improvement areas.

2. Instrument- or software-specific information needed to interpret the data:

The data and documentation files can be opened with Esri ArcMap and any GIS software package.

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## E. DATA-SPECIFIC INFORMATION

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1. XXXXXX data table

Data is updated annually. Dataset Manager is contacted to verify changes to data resulting in NTAD update. The metadata is updated in the same manner. For the most recent data, please visit the NTAD catalog at <https://data-usdot.opendata.arcgis.com/>

A. Number of variables (columns):

The data dictionary found in the original metadata (HPMS.txt, HPMS.met) provides definitions for the attributes.

B. Data Dictionary/Variable List:

Because of the large number of variables, please refer to the Data Dictionary found within the file HPMS.txt (or .met) for names, definitions, and formats of variables.

C. Missing data codes:

None

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## **F. UPDATE LOG**

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This bts\_HPMS\_20210211\_README.txt file was originally created on 2021-02-11 by Dominic Menegus, Geographer, dominic.menegus@dot.gov

[Note changes or update to the readme.txt file, e.g.:]

2020-02-11: Original file created

2023-09-20: Review and updates as needed