

README for “Commodity Flow Survey (CFS) 2017” dataset.
Bureau of Transportation Statistics (BTS), U.S. Department of Transportation (USDOT)
2021-06-01

LINKS TO DATASET

A. Dataset archive link:

<https://doi.org/10.21949/1522565>

SUMMARY OF DATASET

General:

The Commodity Flow Survey (CFS) is a joint effort by the Bureau of Transportation Statistics (BTS) and the U.S. Census Bureau, U.S. Department of Commerce. The survey is the primary source of national and state-level data on domestic freight shipments by establishments in mining, manufacturing, wholesale, auxiliaries, and selected retail and services trade industries located in the 50 states and the District of Columbia. Data are provided on the type, origin and destination, value, weight, modes of transportation, distance shipped, and ton-miles of commodities shipped. The CFS is conducted every 5 years as part of the economic census. It provides a modal picture of national freight flows and represents the only publicly available source of commodity flow data for the highway mode. The CFS was conducted in 1993, 1997, 2002, 2007, 2012, and most recently in 2017.

The CFS assesses the demand for transportation facilities and services, energy use, and safety risk and environmental concerns. CFS data are used by policy makers and transportation planners in various federal, state, and local agencies. Additionally, business owners, private researchers, and analysts use the CFS data for analyzing trends in the movement of goods, mapping spatial patterns of commodity and vehicle flows, forecasting demands for the movement of goods, and determining needs for associated infrastructure and equipment.

The CFS publication provides data by shipment characteristics of commodities transported in the U.S. The publication data series include the geographic area series, temperature control series, exports series, and hazardous materials series.

Exports Shipments:

An export in the CFS is defined as shipment to a foreign country from the 50 states and Washington, DC. Shipments to U.S. possessions and territories are also treated as exports. Respondents to the CFS were asked to report the foreign city, country of destination, and mode of transport by which the shipment left the country. We also asked the respondent to report the U.S. port, airport, or border crossing of exit and report the “domestic mode” of transport used to reach the U.S. destination. Due to the exclusion of industries outside the scope of the CFS (see Industry Coverage), these data are not directly comparable to the 2017 merchandise trade exports published by the Department of Commerce.

Shipment characteristics including value, tons, and ton-miles are presented in summary form in this report. Ton-miles, which is defined as the shipment weight multiplied by the mileage traveled by the shipment, uses domestic mileage only for the calculation.

Hazardous Materials Shipments:

The U.S. Department of Transportation defines hazardous materials as belonging to one of the nine hazard classes, as shown below.

Hazardous Material Classes

Class 1—Explosives

Class 2—Gases

Class 3—Flammable Liquids

Class 4—Flammable Solids

Class 5—Oxidizing Substances and Organic Peroxides

Class 6—Toxic Substances and Infectious Substances

Class 7—Radioactive Materials

Class 8—Corrosive Substances

Class 9—Miscellaneous Hazardous Materials

As part of the shipment characteristics collected in the 2017 CFS, we asked respondents to provide the four-digit United Nations (UN) or North American (NA) identification number. For the 2017 CFS data, we used the UN/NA code to: (1) identify the shipment as hazardous material, and (2) assign the shipment to one of the nine hazardous material classes for purposes of producing summary tabulations.

The data from the 2017 CFS for hazardous material shipments are aggregated to these nine classes, as well as their subcategories known as divisions. Data are also shown for selected UN/NA codes.

For the 2017 CFS, 26 Standard Classification of Transported Goods (SCTG) codes were identified as always being hazardous materials. Even if the respondent left the UN/NA code blank, we assigned the shipment to the appropriate UN/NA code. For example, every shipment of gasoline (SCTG 17110) was assigned a UN/NA code of 1203 either by the respondent or during our tabulation process. When an SCTG could have translated to more than one UN/NA code, the shipment was reviewed and the appropriate UN/NA code was chosen.

Please note that because of the industry coverage and shipment definitions of the CFS, certain hazardous materials such as infectious substances or radioactive wastes were not well represented in the CFS data.

The UN classification system has been adopted for worldwide use by the United Nations Committee of Experts on the Transport of Dangerous Goods. The UN system was incorporated into the Federal Code of Regulations by the U.S. Department of Transportation for domestic transportation in 1980. The NA system is a parallel hazard identification system used in North America when transporting hazardous materials that are not assigned a UN number or when transporting under specific North American exceptions. For additional information about the UN or NA codes, please refer to Title 49, Code of Federal Regulations, Part 172.101.

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A. GENERAL INFORMATION

0. Title of Dataset:

Commodity Flow Survey (CFS) 2017 [dataset]

1. Description of Dataset:

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2. Dataset archive link:

<https://doi.org/10.21949/1522565>

3. Authorship Information:

Principal Data Creator or Data Manager Contact Information

Institution: Bureau of Transportation Statistics, U.S.

Department of Transportation

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

Email: http://transportation.libanswers.com/form.php?queue_id=1810

Associate Data Creator or Data Manager Contact Information

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ORCID: <https://orcid.org/0000-0002-4962-1380>

Institution: National Transportation Library, Bureau of Transportation Statistics, U.S.

Department of Transportation

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

Email: jesse.long.ctr@dot.gov

Organizational Contact Information

Name: Commodity Flow Survey

Institution: Office of Data Development and Standards,

Bureau of Transportation Statistics, U.S. Department of Transportation

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

Email: cfs@dot.gov

4. Date of data collection and update interval:

2017

5. Geographic location of data collection:

United States of America

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

Bureau of Transportation Statistics, U.S. Department of Transportation

B. SHARING/ACCESS & POLICIES INFORMATION

0. Recommended citation for the data:

U.S. Department of Transportation, Bureau of Transportation Statistics. (2020). Commodity Flow Survey (CFS) 2017 [datasets]. <https://doi.org/10.21949/1522565>

1. Licenses/restrictions placed on the data:

These data are in the Public Domain.

2. Was data derived from another source?:

No.

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.

C. DATA & RELATED FILE OVERVIEW

1. File List for the `bts_Commodity_Flow_Survey_2017_DATA_and_Documentation.zip` collection. The data files are divided into 5 folders under the categories: exports, geographic area, hazardous materials, and temperature control.

A. Filename: Exports Folder

1. `BTS_CFSEXP2017.CF1700E1.csv`
2. `BTS_CFSEXP2017.CF1700E2.csv`
3. `BTS_CFSEXP2017.CF1700E3.csv`
4. `BTS_CFSEXP2017.CF1700E4.csv`
5. `BTS_CFSEXP2017.CF1700E5.csv`
6. `BTS_CFSEXP2017.CF1700E6.csv`
7. `BTS_CFSEXP2017.CF1700E7.csv`
8. `BTS_CFSEXP2017.CF1700E8.csv`

Short description:

CSV files that contains the survey data that was collected for 2017, focused on exports.

B. Filename: Geographic Area Folder

1. `BTS_CFSAREA2017.CF1700A01.csv`
2. `BTS_CFSAREA2017.CF1700A02.csv`
3. `BTS_CFSAREA2017.CF1700A03.csv`
4. `BTS_CFSAREA2017.CF1700A04.csv`
5. `BTS_CFSAREA2017.CF1700A05.csv`
6. `BTS_CFSAREA2017.CF1700A06.csv`
7. `BTS_CFSAREA2017.CF1700A07.csv`
8. `BTS_CFSAREA2017.CF1700A08.csv`
9. `BTS_CFSAREA2017.CF1700A09.csv`
10. `BTS_CFSAREA2017.CF1700A10.csv`
11. `BTS_CFSAREA2017.CF1700A11.csv`
12. `BTS_CFSAREA2017.CF1700A12.csv`
13. `BTS_CFSAREA2017.CF1700A13.csv`
14. `BTS_CFSAREA2017.CF1700A14.csv`
15. `BTS_CFSAREA2017.CF1700A15.csv`
16. `BTS_CFSAREA2017.CF1700A16.csv`
17. `BTS_CFSAREA2017.CF1700A17.csv`
18. `BTS_CFSAREA2017.CF1700A18.csv`
19. `BTS_CFSAREA2017.CF1700A19.csv`
20. `BTS_CFSAREA2017.CF1700A20.csv`
21. `BTS_CFSAREA2017.CF1700A21.csv`
22. `BTS_CFSAREA2017.CF1700A22.csv`
23. `BTS_CFSAREA2017.CF1700A23.csv`
24. `BTS_CFSAREA2017.CF1700A24.csv`
25. `BTS_CFSAREA2017.CF1700A25.csv`

Short description:

CSV files that contains the survey data that was collected for 2017, focused on geographic area.

C. Filename: Hazardous Materials Folder

1. BTS_CFSHAZMAT2017.CF1700H01.csv
2. BTS_CFSHAZMAT2017.CF1700H02.csv
3. BTS_CFSHAZMAT2017.CF1700H03.csv
4. BTS_CFSHAZMAT2017.CF1700H04.csv
5. BTS_CFSHAZMAT2017.CF1700H05.csv
6. BTS_CFSHAZMAT2017.CF1700H06.csv
7. BTS_CFSHAZMAT2017.CF1700H07.csv
8. BTS_CFSHAZMAT2017.CF1700H08.csv
9. BTS_CFSHAZMAT2017.CF1700H09.csv
10. BTS_CFSHAZMAT2017.CF1700H10.csv
11. BTS_CFSHAZMAT2017.CF1700H11.csv
12. BTS_CFSHAZMAT2017.CF1700H12.csv
13. BTS_CFSHAZMAT2017.CF1700H13.csv
14. BTS_CFSHAZMAT2017.CF1700H14.csv
15. BTS_CFSHAZMAT2017.CF1700H15.csv
16. BTS_CFSHAZMAT2017.CF1700H16.csv
17. BTS_CFSHAZMAT2017.CF1700H17.csv
18. BTS_CFSHAZMAT2017.CF1700H18.csv

Short description:

CSV files that contains the survey data that was collected for 2017, focused on hazardous materials.

D. Filename: Temperature Control Folder

1. BTS_CFSTEMP2017.CF1700TC01.csv
2. BTS_CFSTEMP2017.CF1700TC02.csv
3. BTS_CFSTEMP2017.CF1700TC03.csv
4. BTS_CFSTEMP2017.CF1700TC04.csv
5. BTS_CFSTEMP2017.CF1700TC05.csv
6. BTS_CFSTEMP2017.CF1700TC06.csv
7. BTS_CFSTEMP2017.CF1700TC07.csv
8. BTS_CFSTEMP2017.CF1700TC08.csv
9. BTS_CFSTEMP2017.CF1700TC09.csv
10. BTS_CFSTEMP2017.CF1700TC10.csv
11. BTS_CFSTEMP2017.CF1700TC11.csv
12. BTS_CFSTEMP2017.CF1700TC12.csv
13. BTS_CFSTEMP2017.CF1700TC13.csv
14. BTS_CFSTEMP2017.CF1700TC14.csv

Short description:

CSV files that contains the survey data that was collected for 2017, focused on temperature control.

E. Filename:

bts_commodity_flow_survey_2017_table_list.pdf

Short description:

A TXT file containing the list of data tables and their titles for the 2017 Commodity Flow Survey.

F. Filename:

bts_commodity_flow_survey_2017_Data Dictionary for Tables.xlsx

Short description:

A XLSX file containing a list of variables and their definitions, which are used in the data tables for the 2017 Commodity Flow Survey.

G. Filename:

bts_commodity_flow_survey_2017_DMP.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.

H. Filename:

bts_commodity_flow_survey_2017_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.

I. Filename:

bts_commodity_flow_survey_2017_Metadata.json

Short description:

The machine-readable .json metadata file based on Project Open Data metadata schema v1.1.

J. Filename:

bts_commodity_flow_survey_2017_methodology.pdf

Short description:

This PDF file includes the description of methods used for collection/generation of data and other associated information.

D. METHODOLOGICAL INFORMATION

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

This information can be found in the file bts_commodity_flow_survey_2017_methodology.pdf, which is included within the bts_Commodity_Flow_Survey_2017_DATA_and_Documentation.zip collection.

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

The data and documentation files can be opened with any text reader. Some versions of the documentation files may be opened with PDF reading software.

E. DATA-SPECIFIC INFORMATION

Varies depending on the data table.

F. UPDATE LOG

This `bts_commodity_flow_survey_2007_README.txt` file was originally created on 2021-02-10 by Jesse A. Long <https://orcid.org/0000-0002-4962-1380> NTL Data Management and Data Curation Fellow, jesse.long.ctr@dot.gov

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

2021-06-01: Original file created