FREIGHT ANALYSIS FRAMEWORK (FAF)
Version 2.2, USER GUIDE

Commodity Origin-Destination Database: 2002-2035

November 20, 2006

FAF estimates commodity flows and related freight transportation activity among states, sub-state regions, and major international gateways. It also forecasts future flows among regions and relates those flows to the transportation network. FAF includes an origin-destination database of commodity flows among regions, and a network database in which flows are converted to truck payloads and related to specific routes.

The FAF commodity origin-destination database includes tons and value of commodity movements among regions by mode of transportation and type of commodity. This document covers FAF Version 2.2 (referred to as $FAF^{2.2}$), which replaces Version 2.1. Specific differences between Version 2.2 and 2.1 are:

1) $FAF^{2.2}$ contains projected commodity flow data ranging from 2010 to 2035 in five-year intervals as well as corrected 2002 base case data from Version 2.1.
2) $FAF^{2.2}$ excludes all foreign-to-foreign shipments via the United States. These in-transit flows were partially covered in the "sea" file of Version 2.1.

Neither version includes international air cargo data, which will be added later.

The $FAF^{2.2}$ 2002 base year database is built entirely from public data sources. Key sources include the 2002 Commodity Flow Survey (CFS), developed by the Census Bureau, U.S. Department of Commerce, and the Bureau of Transportation Statistics (BTS), U.S. Department of Transportation; Foreign Waterborne Cargo data, developed by the U.S. Army Corps of Engineers; and a host of other sources that are documented in various papers available at http://www.ops.fhwa.dot.gov/freight/freight_analysis/faf. FAF statistics do not match those in mode-specific publications primarily due to different definitions that were used to avoid double counting. FAF2.2 statistics should not be compared with original FAF data because different methods and coverage are employed.

Methods in developing the 2002 base year data are transparent; and it has been expanded to cover all modes and significant sources of shipments. Future projected data covering years from 2010 to 2035 with a five-year interval are based on Global Insight's proprietary economic and freight modeling packages. However, the approach/general procedure and assumptions utilized by the modeling packages have been documented and are available for download at http://www.ops.fhwa.dot.gov/freight/freight_analysis/faf.

The 2002 FAF$^{2.2}$ Commodity Origin-Destination Database is a product of the Federal Highway Administration (FHWA), developed in cooperation with the Bureau of Transportation Statistics (BTS) through contracts with Oak Ridge National Laboratory, MacroSys Research and Technology, Global Insight, and Battelle. Because the scope and methods have changed significantly, statistics from FAF^2 and the original FAF should not be compared.

With regards to the import/export data, commodity conversions between classification systems in the "sea" files are currently under further examination. Any modifications will be released in another version of FAF. The Transborder files ("brd") do not distinguish rail-only from truck-rail intermodal and classify container-on-flatcr and trailer-on-flatcar flows between Canada and the United States and between Mexico and the United States as rail.

This document contains basic information for using the FAF$^{2.2}$ Commodity Origin-Destination Database: 2002, 2010, 2015, 2020, 2025, 2030 and 2035. Contents include:

- Description of files
- Data dictionary
- Notes on comparability of region-to-region sums with published national totals
- FAF history

Complete documentation and additional products are available at http://www.ops.fhwa.dot.gov/freight/freight_analysis/faf.

DESCRIPTION OF FILES

The FAF$^{2.2}$ Commodity Origin-Destination Database: 2002-2035 contains six separate data tables (listed below). These six data tables are presented in two different formats for user convenience. The first format lists and presents each of the six tables independently in comma delimited data form identified by the "csv" file extension. The six independent tables are:

1. *dom_kton.csv* contains commodity flows between domestic origins and destinations. Each record includes origin, origin state, destination, destination state, commodity, mode, and tons (thousands of short tons).

2. *dom_mdol.csv* contains commodity flows between domestic origins and destinations. Each record includes origin, origin state, destination, destination state, commodity, mode, and value (millions of dollars).

3. *brd_kton.csv* contains commodity flows by land from Canada and Mexico via ports of entry on the U.S. border to domestic destinations and from the United States via ports of exit on the U.S. border to Canada and Mexico. Records contain origin, origin

state/region, destination, destination state/region, port of entry or exit (coast), commodity, mode used on the domestic leg of the movement, and tons (thousands of short tons). For flows between domestic origins and foreign destinations, mode is for the portion between origin and port of exit. For flows between foreign origins and domestic destinations, mode is for the portion between port of entry and domestic destination.

4. *brd_mdol.csv* contains commodity flows by land from Canada and Mexico via ports of entry on the U.S. border to domestic destinations and from the United States via ports of exit on the U.S. border to Canada and Mexico. Records contain origin, origin state/region, destination, destination state/region, port of entry or exit (coast), commodity, mode used on the domestic leg of the movement, and value (millions of dollars). For flows between domestic origins and foreign destinations, mode is for the portion between origin and port of exit. For flows between foreign origins and domestic destinations, mode is for the portion between port of entry and domestic destination.

5. *sea_kton.csv* contains commodity flows by water from overseas origins via ports of entry to domestic destinations and from domestic origins via ports of exit to overseas destinations. Records contain origin, origin state/region, destination, destination state/region, port of entry or exit (coast), commodity, mode used on the domestic leg of the movement, and tons in thousands of short tons. For flows between domestic origins and foreign destinations, mode is for the portion between origin and port of exit. For flows between foreign origins and domestic destinations, mode is for the portion between port of entry and domestic destination.

6. *sea_mdol.csv* contains commodity flows by water from overseas origins via ports of entry to domestic destinations and from domestic origins via ports of exit to overseas destinations. Records contain origin, origin state/region, destination, destination state/region, port of entry or exit (coast), commodity, mode used on the domestic leg of the movement, value in millions of dollars. For flows between domestic origins and foreign destinations, mode is for the portion between origin and port of exit. For flows between foreign origins and domestic destinations, mode is for the portion between port of entry and domestic destination.

The second format presents the six data tables in Microsoft Access file format, identified by the "mdb" file extension. These six tables are contained in the file named faf2_v22.mdb.

DATA DICTIONARY

The FAF$^{2.2}$ includes: 1) two four-dimensional matrices (one for tons and one for value) for domestic movements in which the four dimensions are origin, destination, commodity, and mode; and 2) four five-dimensional matrices for international movements (one for tons and one for value) in which the five dimensions are origin,

destination, commodity, mode, and coast (port of entry/exit). These matrices are referred to as the Freight Flow Database: Origins and Destinations. The Database is comprised of 114 regions as defined and used in the 2002 CFS plus 17 additional international gateways and 7 international regions. Commodities are defined at the 2-digit SCTG (Standard Classification of Transported Goods) level. The complete FAF[2.2] 2002 U.S. Commodity Flows Matrix is comprised of 138 origin and destination regions, broken down by 43 commodity classes and by 7 major mode/mode combinations.

Column Headings for Domestic Tables (dom_kton and dom_mdol)

Origin: one of the 114 FAF/CFS domestic regions.

Ost: the State in which the FAF "Origin" region is located.

Destination: one of the 114 domestic regions.

Dst: the State in which the FAF "Destination" region is located.

Commodity: one of the 43 commodities defined by the SCTG.

Mode: one of the seven modes.

2002-2035: Thousand tons or million dollars for the given year.

Column Headings for International Tables (brd_kton, brd_mdol, sea_kton, and sea_mdol)

Origin: one of the 121 FAF regions 114 domestic regions plus 7 international regions).

Ost: the State/International region in which the FAF "Origin" region is located.

Destination: one of the 121 FAF regions (114 domestic regions plus 7 international regions).

Dst: the States/International region in which the FAF "Destination" region is located.

Commodity: one of the 43 commodities defined by the SCTG.

Port: one of the 121 FAF domestic regions or 17 additional international gateways at which imports entered or exports departed the United States.

Mode: one of the seven modes used for the domestic portion of the movement.

2002-2035: Thousand tons or million dollars for the given year. FAF Regions

FAF Regions

Domestic FAF regions are based on Metropolitan Statistical Areas (MeSAs), Consolidated Statistical Areas (CSAs), and states or balances of states.

Region ID	BTS/Census Commodity Flow Survey Region Name	FAF Database Abbreviation	FAF State/Region
1	Birmingham-Hoover-Cullman, AL CSA	AL Birmi	AL
2	Remainder of Alabama	AL rem	AL
3	Alaska	AK	AK
4	Phoenix-Mesa-Scottsdale, AZ MeSA	AZ Phoen	AZ
5	Tucson, AZ MeSA	AZ Tucso	AZ
6	Remainder of Arizona	AZ rem	AZ
7	Arkansas	AR	AR
8	Los Angeles-Long Beach-Riverside, CA CSA	CA Los A	CA
9	San Diego-Carlsbad-San Marcos, CA MeSA	CA San D	CA
10	Sacramento--Arden-Arcade--Truckee, CA-NV CSA (CA Part)	CA Sacra	CA
11	San Jose-San Francisco-Oakland, CA CSA	CA San J	CA
12	Remainder of California	CA rem	CA
13	Denver-Aurora-Boulder, CO CSA	CO Denve	CO
14	Remainder of Colorado	CO rem	CO
15	New York-Newark-Bridgeport, NY-NJ-CT-PA CSA (CT Part)	CT New Y	CT
16	Remainder of Connecticut	CT rem	CT
17	Delaware	DE	DE
18	Washington-Arlington-Alexandria, DC-VA-MD-WV MeSA (DC Part)	DC Washi	DC

19	Jacksonville, FL MeSA	FL Jacks	FL
20	Miami-Fort Lauderdale-Miami Beach, FL MeSA	FL Miami	FL
21	Orlando-The Villages, FL CSA	FL Orlan	FL
22	Tampa-St Petersburg-Clearwater, FL MeSA	FL Tampa	FL
23	Remainder of Florida	FL rem	FL
24	Atlanta-Sandy Springs-Gainesville, GA-AL CSA (GA Part)	GA Atlan	GA
25	Remainder of Georgia	GA rem	GA
26	Honolulu, HI MeSA	HI Honol	HI
27	Remainder of Hawaii	HI rem	HI
28	Idaho	ID	ID
29	Chicago-Naperville-Michigan City, IL-IN-WI CSA (IL Part)	IL Chica	IL
30	St Louis, MO-IL MeSA (IL Part)	IL St Lo	IL
31	Remainder of Illinois	IL rem	IL
32	Chicago-Naperville-Michigan City, IL-IN-WI CSA (IN Part)	IN Chica	IN
33	Indianapolis-Anderson-Columbus, IN CSA	IN India	IN
34	Remainder of Indiana	IN rem	IN
35	Iowa	IA	IA
36	Kansas City, MO-KS MeSA (KS Part)	KS Kansa	KS
37	Remainder of Kansas	KS rem	KS
38	Louisville-Elizabethtown-Scottsburg, KY-IN CSA (KY Part)	KY Louis	KY
39	Remainder of Kentucky	KY rem	KY
40	New Orleans-Metairie-Bogalusa, LA CSA	LA New O	LA

41	Remainder of Louisiana	LA rem	LA
42	Maine	ME	ME
43	Baltimore-Towson, MD MeSA	MD Balti	MD
44	Washington-Arlington-Alexandria, DC-VA-MD-WV MeSA (MD Part)	MD Washi	MD
45	Remainder of Maryland	MD rem	MD
46	Boston-Worcester-Manchester, MA-NH CSA (MA Part)	MA Bosto	MA
47	Remainder of Massachusetts	MA rem	MA
48	Detroit-Warren-Flint, MI CSA	MI Detro	MI
49	Grand Rapids-Wyoming-Holland, MI CSA	MI Grand	MI
50	Remainder of Michigan	MI rem	MI
51	Minneapolis-St Paul-St Cloud, MN-WI CSA (MN Part)	MN Minne	MN
52	Remainder of Minnesota	MN rem	MN
53	Mississippi	MS	MS
54	Kansas City, MO-KS MeSA (MO Part)	MO Kansa	MO
55	St Louis-St Charles-Farmington, MO-IL CSA (MO Part)	MO St Lo	MO
56	Remainder of Missouri	MO rem	MO
57	Montana	MT	MT
58	Nebraska	NE	NE
59	Las Vegas-Paradise-Pahrump, NV CSA	NV Las V	NV
60	Remainder of Nevada	NV rem	NV
61	New Hampshire	NH	NH
62	New York-Newark-Bridgeport, NY-NJ-CT-PA CSA (NJ Part)	NJ New Y	NJ

63	Philadelphia-Camden-Vineland, PA-NJ-DE-MD CSA (NJ Part)	NJ Phila	NJ
64	Remainder of New Jersey	NJ rem	NJ
65	New Mexico	NM	NM
66	Albany-Schenectady-Amsterdam, NY CSA	NY Alban	NY
67	Buffalo-Cheektowaga-Tonawanda, NY MeSA	NY Buffa	NY
68	New York-Newark-Bridgeport, NY-NJ-CT-PA CSA (NY Part)	NY New Y	NY
69	Rochester-Batavia-Seneca Falls, NY CSA	NY Roche	NY
70	Remainder of New York	NY rem	NY
71	Charlotte-Gastonia-Salisbury, NC-SC CSA (NC Part)	NC Charl	NC
72	Greensboro--Winston-Salem--High Point, NC CSA	NC Green	NC
73	Raleigh-Durham-Cary, NC CSA	NC Ralei	NC
74	Remainder of North Carolina	NC rem	NC
75	North Dakota	ND	ND
76	Cincinnati-Middletown-Wilmington, OH-KY-IN CSA (OH Part)	OH Cinci	OH
77	Cleveland-Akron-Elyria, OH CSA	OH Cleve	OH
78	Columbus-Marion-Chillicothe, OH CSA	OH Colum	OH
79	Dayton-Springfield-Greenville, OH CSA	OH Dayto	OH
80	Remainder of Ohio	OH rem	OH
81	Oklahoma City-Shawnee, OK CSA	OK Oklah	OK
82	Tulsa-Bartlesville, OK CSA	OK Tulsa	OK
83	Remainder of Oklahoma	OK rem	OK
84	Portland-Vancouver-Beaverton, OR-WA MeSA (OR Part)	OR Portl	OR

85	Remainder of Oregon	OR rem	OR
86	Philadelphia-Camden-Vineland, PA-NJ-DE-MD CSA (PA Part)	PA Phila	PA
87	Pittsburgh-New Castle, PA CSA	PA Pitts	PA
88	Remainder of Pennsylvania	PA rem	PA
89	Rhode Island	RI	RI
90	Greenville-Anderson-Seneca, SC CSA	SC Green	SC
91	Spartanburg-Gaffney-Union, SC CSA	SC Spart	SC
92	Remainder of South Carolina	SC rem	SC
93	South Dakota	SD	SD
94	Memphis, TN-MS-AR MeSA (TN Part)	TN Memph	TN
95	Nashville-Davidson--Murfreesboro--Columbia, TN CSA	TN Nashv	TN
96	Remainder of Tennessee	TN rem	TN
97	Austin-Round Rock, TX MeSA	TX Austi	TX
98	Dallas-Fort Worth, TX CSA	TX Dalla	TX
99	Houston-Baytown-Huntsville, TX CSA	TX Houst	TX
100	San Antonio, TX MeSA	TX San A	TX
101	Remainder of Texas	TX rem	TX
102	Salt Lake City-Ogden-Clearfield, UT CSA	UT Salt	UT
103	Remainder of Utah	UT rem	UT
104	Vermont	VT	VT
105	Richmond, VA MeSA	VA Richm	VA
106	Virginia Beach-Norfolk-Newport News, VA-NC MeSA (VA Part)	VA Virgi	VA

107	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV CSA (VA Part)	VA Washi	VA
108	Remainder of Virginia	VA rem	VA
109	Seattle-Tacoma-Olympia, WA CSA	WA Seatt	WA
110	Remainder of Washington	WA rem	WA
111	West Virginia	WV	WV
112	Milwaukee-Racine-Waukesha, WI CSA	WI Milwa	WI
113	Remainder of Wisconsin	WI rem	WI
114	Wyoming	WY	WY

Gateway ID	**FAF Additional International Gateways**	**FAF Database Abbreviation**	**FAF State/Region**
115	Anchorage, AK	AK-Anchorage	AK
116	Blaine, WA	WA-Blain	WA
117	International Falls, MN	MN-International Falls	MN
118	Alexandria Bay, NY	NY-Alexandria Bay	NY
119	Champlain/Rouses Point, NY	NY-Champlain/Rouses Point	NY
120	Portland, ME	ME-Portland	ME
121	Charleston, SC	SC-Charleston	SC
122	Savannah, GA	GA-Savannah	GA
123	Mobile, AL	AL-Mobile	AL
124	Baton Rouge, LA	LA-Baton Rouge	LA
125	Morgan City, LA	LA-Morgan	LA

126	Lake Charles, LA	LA-Lake Charles	LA
127	Beaumont, TX	TX-Beaumont	TX
128	Corpus Christi, TX	TX-Corpus Christi	TX
129	Brownsville/Hidalgo, TX	TX-Brownsville/Hidalgo	TX
130	Laredo, TX	TX-Laredo	TX
131	El Paso, TX	TX-El Paso	TX

Region ID	FAF Foreign Trade Regions	FAF Database Abbreviation	FAF State/Region
132	Canada	Canada	CN
133	Mexico	Mexico	MX
134	Latin and South America	Americas	AM
135	Asia	Asia E&S	AS
136	Europe	Europe	EU
137	Rest of World	Rest of World	AF
138	Middle East	SW Asia	SW

Commodity Codes

Commodity codes are based on the Standard Classification of Transported Goods (SCTG). More information on SCTG is available at http://www.statcan.ca/english/Subjects/Standards/sctg/sctg-class.htm#19.

SCTG	BTS/Census Full Commodity Name	FAF Abbreviation
1	Live animals and live fish	Live animals/fish
2	Cereal grains	Cereal grains
3	Other agricultural products	Other ag prods.

4	Animal feed and products of animal origin, n.e.c.[1]	Animal feed
5	Meat, fish, seafood, and their preparations	Meat/seafood
6	Milled grain products and preparations, bakery products	Milled grain prods.
7	Other prepared foodstuffs and fats and oils	Other foodstuffs
8	Alcoholic beverages	Alcoholic beverages
9	Tobacco products	Tobacco prods.
10	Monumental or building stone	Building stone
11	Natural sands	Natural sands
12	Gravel and crushed stone	Gravel
13	Nonmetallic minerals n.e.c.[1]	Nonmetallic minerals
14	Metallic ores and concentrates	Metallic ores
15	Coal	Coal
16	Crude Petroleum	Crude petroleum
17	Gasoline and aviation turbine fuel	Gasoline
18	Fuel oils	Fuel oils
19	Coal and petroleum products, n.e.c.[1] (Note: primarily natural gas, selected coal products, and products of petroleum refining, excluding gasoline, aviation fuel, and fuel oil.)	Coal-n.e.c.[1]
20	Basic chemicals	Basic chemicals
21	Pharmaceutical products	Pharmaceuticals
22	Fertilizers	Fertilizers
23	Chemical products and preparations, n.e.c.[1]	Chemical prods.
24	Plastics and rubber	Plastics/rubber
25	Logs and other wood in the rough	Logs
26	Wood products	Wood prods.
27	Pulp, newsprint, paper, and paperboard	Newsprint/paper
28	Paper or paperboard articles	Paper articles
29	Printed products	Printed prods.
30	Textiles, leather, and articles of textiles or leather	Textiles/leather

	leather	
31	Nonmetallic mineral products	Nonmetal min. prods.
32	Base metal in primary or semi-finished forms and in finished basic shapes	Base metals
33	Articles of base metal	Articles-base metal
34	Machinery	Machinery
35	Electronic and other electrical equipment and components and office equipment	Electronics
36	Motorized and other vehicles (including parts)	Motorized vehicles
37	Transportation equipment, n.e.c.[1]	Transport equip.
38	Precision instruments and apparatus	Precision instruments
39	Furniture, mattresses and mattress supports, lamps, lighting fittings	Furniture
40	Miscellaneous manufactured products	Misc. mfg. prods.
41	Waste and scrap	Waste/scrap
42	Mixed freight	Mixed freight
43	Commodity unknown	Unknown

[1] n.e.c. = not elsewhere classified.

Modes of Transportation

1	Truck. Includes private and for-hire truck. Private trucks are operated by a temporary or permanent employee of an establishment or the buyer/receiver of the shipment. For-hire trucks carry freight for a fee collected from the shipper, recipient of the shipment, or an arranger of the transportation.
2	Rail. Any common carrier or private railroad.
3	Water. Includes shallow draft, deep draft and Great Lakes shipments. FAF2 uses definitions by the U.S. Army Corps of Engineers. Shallow draft includes barges, ships, or ferries operating primarily on rivers and canals; in harbors; the Saint Lawrence Seaway; the Intra-coastal Waterway; the Inside Passage to Alaska; major bays and inlets; or in the ocean close to the shoreline. Deep draft includes barges, ships, or ferries operating primarily in the open ocean.
4	Air (includes truck-air). Includes shipments by air or a combination of truck and air. Commercial or private aircraft, and all air service for shipments that typically weigh more than 100 pounds. Includes air freight and air express.
5	Truck-Rail Intermodal. Includes shipments by a combination of truck and rail.

6	Other Multiple Modes. Includes shipments typically weighing less than 100 pounds by Parcel, U.S. Postal Service, or Courier, as well as shipments of all sizes by truck-water, water-rail, and other intermodal combinations.
7	Pipeline and Unknown. Pipeline is included with unknown because region-to-region flows by pipeline are subject to large uncertainty.

Note that modal totals in the FAF2.2 database will not match totals in the rail waybill or waterborne commerce data programs due to differences in definitions and coverage. For example, maritime imports moved inland by truck are counted as truck in the FAF "sea" file and as "water" by the U.S. Army Corps of Engineers. "Intermodal" in FAF is not limited to containerized freight or trailer-on-flatcar.

Other Data Definitions

Commodity. Based on the definition used by the 2002 CFS, commodities are products that an establishment produces, sells, or distributes. This does not include items that are considered as excess or byproducts of the establishment's operation. Survey respondents reported the description and the five-digit Standard Classification of Transported Goods (SCTG) code for the major commodity contained in the shipment, defined as the commodity with the greatest weight in the total shipment.

Shipment. A shipment is a single movement of goods, commodities, or products from an establishment to a single customer or to another establishment owned or operated by the same company as the originating establishment (e.g., a warehouse, distribution center, or retail or wholesale outlet). Full or partial truckloads are counted as a single shipment only if all commodities on the truck are destined for the same location. If a truck makes multiple deliveries on a route, then each stop is counted as one shipment.

Standard Classification of Transported Goods (SCTG). The commodities shown in this report are classified using the SCTG coding system. The SCTG coding system was developed jointly by agencies of the United States and Canadian governments based on the Harmonized Commodity Description and Coding System (Harmonized System) to address statistical needs in regard to products transported. More information on SCTG is available at http://www.statcan.ca/english/Subjects/Standard/sctg/sctg-class.htm#19.

Tons shipped. The total weight of all shipments transported between any pair of FAF regions or within a FAF region during the course of a calendar year. Tons, in the FAF, are stated as short tons (2,000 pounds). For freight shipped to distribution centers for subsequent reshipment, the tonnage is counted each time the goods are transported. As with value of shipments, the tonnage of a product could be counted multiple times depending on the number of times the product is transported in the production and consumption cycle. Thus, tons shipped can be, and frequently are, multiples of the estimated tons of a commodity as measured for the purposes of the Gross Domestic Product (GDP).

Value of commodities transported. The net selling value, f.o.b. (free on board) plant, exclusive of freight charges and excise taxes. The value data are displayed in millions of 2002 U.S. dollars.

The total value of shipments, as measured by the 2002 CFS, and hence by the FAF, and the U.S. GDP provide different measures of economic activity in the United States and are not directly comparable. GDP is the value of all goods produced and services performed by labor and capital located in the United States. In 2002, the U.S. GDP was estimated at $10.4 trillion (measured in current U.S. dollars). The value of shipments, as measured by ORNL, is the market value of goods shipped from manufacturing, mining, wholesale, and mail-order retail establishments, as well as warehouses and managing offices of multi-unit establishments. This is estimated to be $13 trillion in 2002.

Three important differences can be identified between GDP and value of shipments:

- GDP United States. FAF measures goods shipped from a subset of all goods-producing establishments.
- GDP measures the value of goods produced and of services performed. FAF measures the value of goods shipped.
- GDP counts only the value-added at each step in the production of a product. FAF captures the value of shipments of materials used to produce or manufacture a product, as well as the value of shipments of the finished product itself. This means that the value of the materials used to produce a particular product can contribute multiple times to the value.

Acronyms

AADT	Annual Average Daily Traffic
AAR	Association of American Railroads
AEO	Annual Energy Outlook
AMSA	American Moving and Storage Association
AOP	Association of Oil Pipe Lines
API	American Petroleum Institute
ATA	American Trucking Association
BEA	Bureau of Economic Analysis
BTS	Bureau of Transportation Statistics
BTS/OAI	Bureau of Transportation Statistics/Office of Airline Information
CBP	County Business Patterns
CDD	Construction and Demolition Debris
CFS	Commodity Flow Survey

COTS	Commercial off the Shelf
CV	Coefficient of Variation
DMV	Department of Motor Vehicles
EEZ	Exclusive Economic Zone
EIA	Energy Information Administration
EPA	Environmental Protection Agency
EWITS	Eastern Washington Intermodal Transportation Study
FAF	Freight Analysis Framework
FERC	Federal Energy Regulatory Commission
FGDC	Federal Geographic Data Committee
FHWA	Federal Highway Administration
FIPS	Federal Information Processing Standards
FMIP	Freight Model Improvement Program
GDP	Gross Domestic Product
GSP	Gross State Product
GVW	Gross Vehicle Weight
HERS	Highway Economics Requirement System
HPMS	Highway Performance Monitoring System
HS	Harmonized System
ICC	Interstate Commerce Commission
IPF	Iterative Proportional Fitting
ITDS	International Trade Data System
LNG	Liquefied Natural Gas
LPMS	Lock Performance Monitoring System
MARAD	Maritime Administration
MIO	Maritime Input Output
MPO	Metropolitan Planning Organization
MeSA	Metropolitan Statistical Area
MSW	Municipal Solid Waste
MTA	Metropolitan Transportation Authority
NAFTA	North American Free Trade Agreement
NAICS	North American Industry Classification System
NASS	National Agricultural Statistics Service
NDC	Navigation Data Center
NHPN	National Highway Planning Network
NHTSA	National Highway Traffic Safety Administration
NFD	Network Flow Database
NMFS	National Marine Fisheries Service

NOAA	National Oceanic and Atmospheric Administration
NSDI	National Spatial Data Infrastructure
ODCM	Origin, Destination, Commodity, Mode
ORNL	Oak Ridge National Laboratory
PAD	Petroleum Administration Districts
PCE	Passenger Car Equivalents
PIERS	Port Import Export Reporting Service
POC	Port of Clearance
POD	Port of Debarkation
POE	Port of Embarkation
RCRA	Resource Conservation and Recovery Act
REIS	Regional Economic Information System
RO-RO Ship	Roll-on, Roll-off Ship
ROW	Rest of World
SCTG	Standard Classification of Transported Goods
SFTA	Strategic Freight Transportation Analysis
SIA	Spatial Interaction
SIC	Standard Industrial Classification
SQL	Standard Query Language
STB	Surface Transportation Board
STCC	Standard Transportation Commodity Code
TEU	Twenty-foot Equivalent Unit
TPE	Truck Payload Equivalents
UGPTI	Upper Great Plains Transportation Institute
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USDOE	U.S. Department of Energy
USDOT	U.S. Department of Transportation
VIUS	Vehicle Inventory and Use Survey
VTRIS	Vehicle Travel Information System
WCO	World Customs Organization
WCSC	Waterborne Commerce Statistical Center
WCUS	Waterborne Commerce Commodity Code
WTE	Waste to Energy

Data Sources

Carload Waybill Sample

http://www.stb.dot.gov/stb/industry/econ_waybill.html

Domestic Waterborne Commerce of the United States

http://www.iwr.usace.army.mil/ndc/wcsc/wcsc.htm

Federal Energy Regulatory Commission Annual Report

http://www.ferc.gov/about/strat-docs/annual_rep.asp

Fisheries of the United States Annual Report

http://www.st.nmfs.gov/st1/fus/current/2002-fus.pdf - search='Fisheries%20of%20the%20United%20

International Waterborne Commerce of the United States

http://www.iwr.usace.army.mil/ndc/usforeign/index.htm

The import and export data are found at:

http://www.iwr.usace.army.mil/ndc/db/foreign/data/

Municipal Solid Waste- BioCycle and Beck/Chartwell Studies

http://www.jgpress.com/archives/_free/000089.html

http://www.jgpress.com/archives/_free/000138.html

Municipal Solid Waste-Franklin/EPA Study

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NOTES ON COMPARABILITY OF REGION-TO-REGION SUMS WITH PUBLISHED NATIONAL TOTALS

Summation of FAF2 region-to-region flows across all regions differ from published national totals, primarily due to differences in coverage and definitions.

FAF2 coverage is more complete than the original FAF and uses very different estimation methods. Statistics from FAF2 should not be compared to statistics from the original FAF.

FAF2 coverage is more complete than the Commodity Flow Survey, which is limited to shipments by domestic establishments in mining, manufacturing, and wholesale. FAF2 also includes shipments by foreign establishments (i.e. imports) and shipments by domestic establishments in retail, services, construction, and government, as well as logging, farm-based shipments, and crude petroleum.

FAF2 includes local and long distance trucking, which is more extensive than "intercity trucking" reported in other publications.

FAF2 totals for rail include shipments that use multiple carriers only once, while the Rail Waybill counts each terminal-to-terminal move separately. FAF2 classifies rail-truck and other intermodal combinations separately from rail-only, while rail-only and rail combinations with other modes are all counted together in the Rail Waybill.

FAF2 totals for water include shipments that pass through ports only once, while the Corps of Engineers counts an international shipment to a domestic port that then moves by inland waterway or in domestic coastwise traffic twice. FAF2 classifies water-rail and other intermodal combinations separately from water-only, while water-only and water combinations with other modes are all counted together in Waterborne Commerce Statistics. Additionally, once a maritime import arrives at a U.S. port of entry, FAF2 assigns the shipments to the domestic mode that transports the goods from the port to the final inland destination.

Summations FAF2 region-to-region flows will not quite match FAF2 totals in publications such as FHWA's Freight Facts and Figures and BTS' Freight in America. FAF2 region-to-region totals are 0.67 percent lower in tons and 3.0 percent lower in value than the published national totals. Differences are due to the treatment of air imports and other adjustments that are explained in FAF2 technical documentation.

The published totals of international shipments in FAF2 include the mode used to enter or leave the country, as well as the domestic mode used between the port and inland origin or destination.

FAF History

FAF1 - often referred to as the "Original" FAF are based on private and proprietary data. Analyses covered under FAF1 are base year 1998 and future 2010 and 2020. Released in 2000.

FAF2 Version 2.1 (FAF2.1) - Released in January 2006. Version 2.1 covers commodity origin destination data for base year 2002.

FAF2 Version 2.2 (FAF2.2) - Released in November 2006. Version 2.2 replaces Version 2.1. It covers commodity origin destination data including base year 2002 and future years from 2010 to 2035 with a five-year interval. Version 2.2 includes minor corrections to 2002 base year flows in Version 2.1.