

Data understanding of FREIGHT ANALYSIS FRAMEWORK

Basic Definitions

Mode of Transportation

FAF includes the seven modes of transportation from the Commodity Flow Survey (CFS) plus an extra category involving imports. Table 1 below provides a summary and brief description of each mode. Specifically,

- Domestic Modes are the modes used between domestic origins and destinations, modes used between zones of entry and domestic destination for imports, and modes used between domestic origins and zones of exit for exports.
- Foreign Modes comprise the mode of arrival to zones of entry for imports or mode of departure from zones of exit for exports; they do not include modes used in foreign countries to and from foreign ports and airports.

Note about Multiple Modes and Mail : Shipments reported as Multiple Modes can include anything from containerized cargo to coal moving from mine to railhead by truck and rail to harbor. The "Mail" component recognizes that shippers who use parcel delivery services typically do not know what modes were involved after the shipment was picked up.

Type of Commodity

Commodities are classified at the 2-digit level of the Standard Classification of Transported Goods (SCTG), which is summarized in Table 2.

Geography

- Origin – The beginning of a freight movement regardless of geography
 - Domestic Origin
 - For domestic freight movement, the FAF region or state where a freight movement begins
 - For imports, the FAF region or state where a freight movement begins the domestic portion of the trip (see Zone of Entry)

- For exports, the FAF region or state where a freight movement begins the domestic portion of the trip
 - Foreign Origin – For imports, the foreign region where a freight movement begins
- Destination – The ending of a freight movement regardless of geography
 - Domestic Destination
 - For domestic freight movements, the FAF region or state where a freight movement ends
 - For imports, the FAF region or state where a freight movement ends the domestic portion of the trip
 - For exports, the FAF region or state where a freight movement ends the domestic portion of the trip (see Zone of Exit)
 - Foreign Destination – For exports, the foreign region where a freight movement ends
- FAF Region – The 132 domestic regions defined in Table 3.
- State – The 50 States and Washington, D.C.
- Foreign Region – The 8 international regions defined in Table 4 were based on information obtained from the United Nations Statistics Division. Specific countries included in each region can be found at the United Nations site.
- Zone of Entry – This is the FAF region or state where an import enters the United States .This term refers to the entire region or state and does not limit the entry to any single location. This replaces the term "international gateway" used previously.
- Zone of Exit – This is the FAF region or state where an export leaves the United States .This term refers to the entire region or state and does not limit the exit to any single location.

Origin-Destination-Commodity-Mode Regional Database

FAF domestic region level datasets and products provide information for states, state portions of large metropolitan areas, and remainders of states as listed in Table 3. Metropolitan areas consist of Metropolitan Statistical Areas or Consolidated Statistical Areas as defined by the Office of Management and Budget. When a metropolitan area is entirely within a state or when a state's portion of a multi-state metropolitan area is large enough to support the sampling procedures in the CFS, the area becomes a separate FAF region. Small single-state metropolitan areas and small portions of a multi-state metropolitan area are part of the State or Remainder of State.

Tables

Table 1 FAF Modes

Code	Mode	Description
1	Truck	Includes private and for-hire truck. Does not include truck that is part of Multiple Modes and Mail or truck moves in conjunction with domestic air cargo.
2	Rail	Includes any common carrier or private railroad. Does not include rail that is part of Multiple Modes and Mail .
3	Water	Includes shallow draft, deep draft, Great Lakes and intra-port shipments. Does not include water that is part of Multiple Modes and Mail .
4	Air(includes truck-air)	Includes shipments move by air or a combination of truck and air in commercial or private aircraft. Includes air freight and air express. In the case of imports and exports by air, domestic moves by ground to and from the port of entry or exit are categorized with Truck .
5	Multiple Modes and Mail	Includes shipments by multiple modes and by parcel delivery services, U.S. Postal Service, or couriers (capped at 150 pounds). This category is not limited to containerized or trailer-on-flatcar shipments.
6	Pipeline	Includes crude petroleum, natural gas, and product pipelines. Note: Does include flows from offshore wells to land which are counted as Water moves by the U.S. Army Corps of Engineers. Does not include pipeline that is part of Multiple Modes and Mail .
7	Other and Unknown	Includes movements not elsewhere classified such as flyaway aircraft, and shipments for which the mode cannot be determined.
8	No Domestic Mode	Includes shipments that have an international mode, but no domestic mode and is limited to import shipments of crude

Code	Mode	Description
		petroleum transferred directly from inbound ships to a U.S. refinery at the zone of entry. This is done to ensure a proper accounting of import flows, while avoiding assigning flows to the domestic transportation network that do not use it.

Table 2 FAF Commodity Codes

Code	Commodity Description
01	Animals and Fish (live)
02	Cereal Grains (includes seed)
03	Agricultural Products (excludes Animal Feed, Cereal Grains, and Forage Products)
04	Animal Feed, Eggs, Honey, and Other Products of Animal Origin
05	Meat, Poultry, Fish, Seafood, and Their Preparations
06	Milled Grain Products and Preparations, and Bakery Products
07	Other Prepared Foodstuffs, Fats and Oils
08	Alcoholic Beverages and Denatured Alcohol
09	Tobacco Products
10	Monumental or Building Stone
11	Natural Sands
12	Gravel and Crushed Stone (excludes Dolomite and Slate)
13	Other Non-Metallic Minerals not elsewhere classified
14	Metallic Ores and Concentrates
15	Coal
16	Crude Petroleum
17	Gasoline, Aviation Turbine Fuel, and Ethanol (includes Kerosene, and Fuel Alcohols)
18	Fuel Oils (includes Diesel, Bunker C, and Biodiesel)
19	Other Coal and Petroleum Products, not elsewhere classified

Code	Commodity Description
20	Basic Chemicals
21	Pharmaceutical Products
22	Fertilizers
23	Other Chemical Products and Preparations
24	Plastics and Rubber
25	Logs and Other Wood in the Rough
26	Wood Products
27	Pulp, Newsprint, Paper, and Paperboard
28	Paper or Paperboard Articles
29	Printed Products
30	Textiles, Leather, and Articles of Textiles or Leather
31	Non-Metallic Mineral Products
32	Base Metal in Primary or Semi-Finished Forms and in Finished Basic Shapes
33	Articles of Base Metal
34	Machinery
35	Electronic and Other Electrical Equipment and Components, and Office Equipment
36	Motorized and Other Vehicles (includes parts)
37	Transportation Equipment, not elsewhere classified
38	Precision Instruments and Apparatus
39	Furniture, Mattresses and Mattress Supports, Lamps, Lighting Fittings, and Illuminated Signs
40	Miscellaneous Manufactured Products
41	Waste and Scrap (excludes of agriculture or food, see 041xx)
43	Mixed Freight
99	Commodity unknown

Table 3 FAF Domestic Regions

* Many census metropolitan area (CMA) boundaries cross more than one state. Major subareas of a CMA are defined as separate FAF regions, one for each state. Small subareas of a CMA are included with the State or Rest of State region identified in this field.

**Type of Region codes:

C: Combined Statistical Area (CSA)

M: Metropolitan Statistical Area (MSA)

R: Rest of State-everything in a state that is not included in a CSA or MSA (RoS)

S: State that does not include a CSA or MSA

SM: Whole state is part of MSA

Code	FAF Region*	State	State/Remainder of State which includes Part of this CMA*	Type of Region**
011	Birmingham-Hoover-Talladega, AL CFS Area	AL		C
012	Mobile-Daphne-Fairhope, AL CFS Area	AL		C
019	Remainder of Alabama	AL		R
020	Alaska	AK		S
041	Phoenix-Mesa-Glendale, AZ CFS Area	AZ		M
042	Tucson-Nogales, AZ CFS Area	AZ		C
049	Remainder of Arizona	AZ		R
050	Remainder of Arkansas	AR		S
061	Los Angeles-Long Beach, CA CFS Area	CA		C
062	Sacramento-Roseville, CA CFS Area	CA		C
063	San Diego-Carlsbad-San Marcos, CA CFS Area	CA		M
064	San Jose-San Francisco-Oakland, CA CFS Area	CA		C
065	Fresno-Madera, CA	CA		C

Code	FAF Region*	State	State/Remainder of State which includes Part of this CMA*	Type of Region**
	CFS Area			
069	Remainder of California CA	R		
081	Denver-Aurora, CO CFS Area	CO		C
089	Remainder of Colorado	CO		R
091	Hartford-West Hartford-East Hartford, CT CFS Area	CT		M
092	New York-Newark, NY-NJ-CT-PA CFS Area (CT Part)	CT	NY, NY, PA	C
099	Remainder of Connecticut	CT		R
101	Philadelphia-Reading-Camden, PA-NJ-DE-MD CFS Area (DE Part)	DE	PA, NJ, MD	C
109	Remainder of Delaware	DE		R
111	Washington-Arlington-Alexandria, DC-VA-MD-WV CFS Area (DC Part)	DC	VA, MD, WV	SM
121	Jacksonville-St. Marys-Palatka, FL-GA CFS Area (FL Part)	FL	GA	C
122	Miami-Fort Lauderdale-Port St. Lucie, FL CFS Area	FL		C
123	Orlando-Deltona-Daytona Beach, FL CFS Area	FL		C
124	Tampa-St. Petersburg-Clearwater, FL CFS Area	FL		M
129	Remainder of Florida	FL		R

Code	FAF Region*	State	State/Remainder of State which includes Part of this CMA*	Type of Region**
131	Atlanta-Athens-Clarke County-Sandy Springs, GA CFS Area	GA		C
132	Savannah-Hinesville-Statesboro, GA CFS Area	GA		C
139	Remainder of Georgia	GA		R
151	Urban Honolulu, HI CFS Area	HI		M
159	Remainder of Hawaii	HI		R
160	Idaho	ID	IN, WI	S
171	Chicago-Naperville, IL-IN-WI CFS Area (IL Part)	IL		C
172	St. Louis-St. Charles-Farmington, MO-IL CFS Area (IL Part)	IL	MO	C
179	Remainder of Illinois	IL	R	
181	Chicago-Naperville, IL-IN-WI CFS Area (IN Part)	IN	IL, WI	C
182	Indianapolis-Carmel-Muncie, IN CFS Area	IN		C
183	Fort Wayne-Huntington-Auburn, IN CFS Area	IN		C
189	Remainder of Indiana	IN		R
190	Remainder of Iowa	IA		S
201	Kansas City-Overland Park-Kansas City, MO-KS CFS Area (KS Part)	KS	MO	C
202	Wichita-Arkansas	KS		C

Code	FAF Region*	State	State/Remainder of State which includes Part of this CMA*	Type of Region**
	City-Winfield, KS CFS Area			
209	Remainder of Kansas	KS		R
211	Cincinnati-Wilmington-Maysville, OH-KY-IN CFS Area (KY Part)	KY	OH, IN	C
212	Louisville/Jefferson County-Elizabethtown-Madison, KY-IN CFS Area (KY Part)	KY	IN	C
219	Remainder of Kentucky	KY		R
221	Baton Rouge, LA CFS Area	LA		M
222	Lake Charles, LA CFS Area	LA		M
223	New Orleans-Metairie-Hammond, LA-MS CFS Area (LA Part)	LA	MS	C
229	Remainder of Louisiana	LA		R
230	Remainder of Maine	ME		S
241	Baltimore-Columbia-Towson, MD CFS Area	MD	M	
242	Washington-Arlington-Alexandria, DC-VA-MD-WV CFS Area (MD Part)	MD	DC, VA, WV	M
249	Remainder of Maryland	MD		R
251	Boston-Worcester-Providence, MA-RI-NH-CT CFS Area (MA Part)	MA	RI, NH, CT	C
259	Remainder of Massachusetts	MA		R

Code	FAF Region*	State	State/Remainder of State which includes Part of this CMA*	Type of Region**
261	Detroit-Warren-Ann Arbor, MI CFS Area	MI	C	
262	Grand Rapids-Wyoming-Muskegon, MI CFS Area	MI	C	
269	Remainder of Michigan	MI		R
271	Minneapolis-St. Paul, MN-WI CFS Area (MN Part)	MN	WI	C
279	Remainder of Minnesota	MN		R
280	Remainder of Mississippi	MS		S
291	Kansas City-Overland Park-Kansas City, MO-KS CFS Area (MO Part)	MO	KS	C
292	St. Louis-St. Charles-Farmington, MO-IL CFS Area (MO Part)	MO	IL	C
299	Remainder of Missouri	MO		R
300	Remainder of Montana	MT		S
311	Omaha-Council Bluffs-Fremont, NE-IA CFS Area (NE Part)	NE	IA	C
319	Remainder of Nebraska	NE		R
321	Las Vegas-Henderson, NV-AZ CFS Area (NV Part)	NV	AZ	C
329	Remainder of Nevada	NV		R
331	Boston-Worcester-Providence, MA-RI-NH-CT CFS Area (NH Part)	NH	MA, RI, CT	C

Code	FAF Region*	State	State/Remainder of State which includes Part of this CMA*	Type of Region**
339	Remainder of New Hampshire	NH		R
341	New York-Newark, NY-NJ-CT-PA CFS Area (NJ Part)	NJ	NY, CT, PA	C
342	Philadelphia-Reading-Camden, PA-NJ-DE-MD CFS Area (NJ Part)	NJ	PA, DE, MD	C
350	Remainder of New Mexico	NM		S
361	Albany-Schenectady, NY CFS Area	NY		C
362	Buffalo-Cheektowaga, NY CFS Area	NY		C
363	New York-Newark, NY-NJ-CT-PA CFS Area (NY Part)	NY	NJ, CT, PA	C
364	Rochester-Batavia-Seneca Falls, NY CFS Area	NY		C
369	Remainder of New York	NY		R
371	Charlotte-Concord, NC-SC CFS Area (NC Part)	NC	SC	C
372	Greensboro-Winston-Salem-High Point, NC CFS Area	NC		C
373	Raleigh-Durham-Chapel Hill, NC CFS Area	NC		C
379	Remainder of North Carolina	NC		R
380	Remainder of North Dakota	ND		S
391	Cincinnati-Wilmington-Maysville, OH-KY-IN CFS Area (OH Part)	OH	KY, IN	C
392	Cleveland-Akron-	OH		C

Code	FAF Region*	State	State/Remainder of State which includes Part of this CMA*	Type of Region**
	Canton, OH CFS Area			
393	Columbus-Marion-Zanesville, OH CFS Area	OH		C
394	Dayton-Springfield-Sidney, OH CFS Area	OH		C
399	Remainder of Ohio	OH		R
401	Oklahoma City-Shawnee, OK CFS Area	OK		C
402	Tulsa-Muskogee-Bartlesville, OK CFS Area	OK		C
409	Remainder of Oklahoma	OK		R
411 Portland-Vancouver-Salem, OR-WA CFS Area (OR Part)	OR	WA	C	
419	Remainder of Oregon	OR		R
421	Philadelphia-Reading-Camden, PA-NJ-DE-MD CFS Area (PA Part)	PA	NJ, DE, MD	C
422	Pittsburgh-New Castle-Weirton, PA-OH-WV CFS Area (PA Part)	PA	OH, WV	C
423	New York-Newark, NY-NJ-CT-PA CFS Area (PA Part)	PA	NY, NJ, CT	C
429	Remainder of Pennsylvania	PA		R
441	Boston-Worcester-Providence, MA-RI-NH-CT CFS Area (RI Part)	RI	MA, NH, CT	SM
451	Charleston-North Charleston-Summerville, SC CFS Area	SC		M

Code	FAF Region*	State	State/Remainder of State which includes Part of this CMA*	Type of Region**
452	Greenville-Spartanburg-Anderson, SC CFS Area	SC		C
459	Remainder of South Carolina	SC		R
460	Remainder of South Dakota	SD		S
471	Memphis, TN-MS-AR CFS Area (TN Part)	TN	MS, AR	C
472	Nashville-Davidson-Murfreesboro, TN CFS Area	TN		C
473	Knoxville-Morristown-Sevierville, TN CFS Area	TN		C
479	Remainder of Tennessee	TN		R
481	Austin-Round Rock, TX CFS Area	TX		M
482	Beaumont-Port Arthur, TX CFS Area	TX		M
483	Corpus Christi-Kingsville-Alice, TX CFS Area	TX		C
484	Dallas-Fort Worth, TX-OK CFS Area (TX Part)	TX	OK	C
485	El Paso-Las Cruces, TX-NM CFS Area (TX Part)	TX	NM	C
486	Houston-The Woodlands, TX CFS Area	TX		C
487	Laredo, TX CFS Area	TX		M
488	San Antonio-New Braunfels, TX CFS Area	TX		M
489	Remainder of	TX		R

Code	FAF Region*	State	State/Remainder of State which includes Part of this CMA*	Type of Region**
	Texas			
491	Salt Lake City-Provo-Orem, UT CFS Area	UT		C
499	Remainder of Utah	UT		R
500	Remainder of Vermont	VT		S
511	Richmond, VA CFS Area	VA		M
512	Virginia Beach-Norfolk, VA-NC CFS Area (VA Part)	VA	NC	C
513	Washington-Arlington-Alexandria, DC-VA-MD-WV CFS Area (VA Part)	VA DC, MD,	WV	M
519	Remainder of Virginia	VA		R
531	Seattle-Tacoma, WA CFS Area	WA		C
532	Portland-Vancouver-Salem, OR-WA CFS Area (WA Part)	WA	OR	C
539	Remainder of Washington	WA		R
540	Remainder of West Virginia	WV		S
551	Milwaukee-Racine-Waukesha, WI CFS Area	WI		C
559	Remainder of Wisconsin	WI		R
560	Remainder of Wyoming	WY		S

Table 4 FAF Foreign Regions

Code	FAF Region
801	Canada
802	Mexico
803	Rest of Americas

Code	FAF Region
804	Europe
805	Africa
806	SW & Central Asia
807	Eastern Asia
808	SE Asia & Oceania

Table 5 Data Dictionary for FAF Dataset

Field	Description	Codes	Comment
fr_orig	Foreign region origin	Table 4	Imports: Foreign origin
dms_org	Domestic region origin	Table 3	Domestic: Origin Zone. Imports: Zone of entry. Exports: Origin Zone
dms_dest	Domestic region destination	Table 3	Domestic: Destination Zone. Imports: Destination Zone. Exports: Zone of exit
fr_dest	Foreign region destination	Table 4	Exports: Foreign destination
fr_inmode	Foreign inbound mode	Table 1	Imports: Mode from foreign origin to zone of entry
dms_mode	Domestic mode	Table 1	Domestic: Mode. Imports: Mode from Zone of entry to destination. Exports: Mode from origin to zone of exit
fr_outmode	Foreign outbound mode	Table 1	Exports: Mode from zone of exit to foreign destination
sctg2	Commodity	Table 2	--
trade_type	Type of trade	1.Domestic Only 2.Import 3.Export	--
Value	Value in \$million	--	The price of each commodity is set similar to its respective price in 2012. For example, the constant values of goods for 2014 are in 2012 dollars.
tons	Weight in thousand tons	--	--
tmiles	Value in million	--	A ton-mile is the movement of one ton of freight for one mile.This measure is at the shipment level

Field	Description	Codes	Comment
Curval(current_value)	Value in \$million	--	Actual nominal-dollar values for the reported year. For example, the current values of goods for 2014 are in 2014 dollars.
wgt_dist	Weighted Euclidean distance .Value in mile	--	Weighted Euclidean distance between the origin and distenatin