

Preliminary FAF Analysis

Freight Analysis Framework (FAF)

Version 3.5

- ❑ Publicly available dataset developed by the FHWA Office of Freight Management and Operations
- ❑ Integrates data from a variety of sources including the US Census Bureau's 2007 Commodity Flow Survey
- ❑ Provides estimates for tonnage, value, and domestic ton-miles by region of origin and destination, commodity type, and mode for 2007 and forecasts through 2040

Top NCR Commodities by Weight

Rank	Commodity Class	Total (thousands of tons)	Cumulative Share
1	Gravel and crushed stone	41,277	19%
2	Waste and scrap	32,319	35%
3	Nonmetallic mineral products	25,212	47%
4	Coal and petroleum products, n.e.c. (includes Natural gas)	14,421	53%
5	Natural sands	8,869	58%
6	Other prepared foodstuffs and fats and oils	8,032	61%
7	Wood products	7,821	65%
8	Nonmetallic minerals n.e.c.	7,212	69%
9	Mixed freight	7,164	72%
10	Coal	6,230	75%
11	Gasoline and aviation turbine fuel	5,549	78%
12	Commodity unknown	4,168	79%
13	Fuel oils	3,709	81%
14	Cereal grains	3,439	83%
15	Machinery	3,438	84%
16	Articles of base metal	2,982	86%
17	Other agricultural products	2,549	87%
18	Alcoholic beverages	1,941	88%
19	Milled grain products and preparations, bakery products	1,890	89%
20	Printed products	1,725	90%
	All Other Commodities	21,745	100%
	Grand Total	211,693	

Top NCR Commodities by Value

Rank	Commodity Class	Total (millions of 2007 \$)	Cumulative Share
1	Electronic and other electrical equipment and components and office equipment	41,277	13%
2	Machinery	32,319	25%
3	Mixed freight	25,212	34%
4	Pharmaceutical products	14,421	42%
5	Textiles, leather, and articles of textiles or leather	8,869	48%
6	Motorized and other vehicles (including parts)	8,032	52%
7	Miscellaneous manufactured products	7,821	57%
8	Other prepared foodstuffs and fats and oils	7,212	61%
9	Articles of base metal	7,164	64%
10	Precision instruments and apparatus	6,230	67%
11	Plastics and rubber	5,549	70%
12	Basic chemicals	4,168	72%
13	Coal and petroleum products, n.e.c. (includes Natural gas)	3,709	74%
14	Chemical products and preparations, n.e.c.	3,439	77%
15	Nonmetallic mineral products	3,438	79%
16	Commodity unknown	2,982	81%
17	Furniture, mattresses and mattress supports, lamps, lighting fittings, and illuminated signs	2,549	83%
18	Printed products	1,941	85%
19	Wood products	1,890	87%
20	Meat, fish, seafood, and their preparations	1,725	89%
	All Other Commodities	26,614	100%
	Grand Total	240,712	

Mode Share for Top Commodities - Weight

Rank	Commodity Class	Truck	Rail	Multiple				Unknown /
				Modes & Mail	Water	Air	Pipeline	Other
1	Gravel	89%		11%				
2	Waste/scrap	97%	3%					
3	Nonmetal min. prods.	95%	4%					1%
4	Coal & petrol prods.	34%	2%		1%		63%	
5	Natural sands	98%		1%				1%
6	Other foodstuffs	93%	2%	5%				
7	Wood prods.	92%	6%	1%				1%
8	Nonmetallic minerals	96%	2%	2%				
9	Mixed freight	99%		1%				
10	Coal	5%	94%	1%				
11	Gasoline	100%						
12	Unknown	100%						
13	Fuel oils	99%						
14	Cereal grains	65%	17%	17%				
15	Machinery	98%	1%	1%				
16	Articles-base metal	95%	1%	3%				1%
17	Other ag prods.	94%	4%	2%				
18	Alcoholic beverages	97%	1%	1%				
19	Milled grain prods.	94%		3%				3%
20	Printed prods.	88%		4%		1%		7%
	All Other	88%	5%	4%				2%
	Total	86%	5%	4%		0%	4%	1%

Mode Share for Top Commodities - Value

Rank	Commodity Class	Multiple						Unknown /
		Truck	Rail	Modes & Mail	Water	Air	Pipeline	Other
1	Electronics	56%	1%	31%		9%		3%
2	Machinery	95%		4%				
3	Mixed freight	92%		6%				1%
4	Pharmaceuticals	69%		31%		1%		
5	Textiles/leather	68%		29%		3%		1%
6	Motorized vehicles	82%		6%				12%
7	Misc. mfg. prods.	65%		33%		2%		1%
8	Other foodstuffs	89%	2%	9%				
9	Articles-base metal	88%	1%	10%				1%
10	Precision instruments	44%		38%		18%		
11	Plastics/rubber	78%	3%	17%				2%
12	Basic chemicals	94%	3%	3%				
13	Coal & petrol prods.	41%	1%	1%	1%		56%	
14	Chemical prods.	83%	2%	13%				2%
15	Nonmetal min. prods.	79%	1%	10%		4%		6%
16	Unknown	100%						
17	Furniture	91%		9%				
18	Printed prods.	63%		32%		1%		4%
19	Wood prods.	94%	3%	2%				1%
20	Meat/seafood	99%		1%				
	All Other	90%	3%	7%				1%
	Total	79%	1%	15%	0%	2%	1%	2%

Direction for Top Commodities - Weight

Rank	Commodity Class	Inbound	Outbound	Intraregional
1	Gravel and crushed stone	18%	3%	78%
2	Waste and scrap	19%	21%	60%
3	Nonmetallic mineral products	22%	16%	61%
4	Coal and petroleum products, n.e.c. (includes Natural gas)	55%	1%	44%
5	Natural sands	27%	3%	70%
6	Other prepared foodstuffs and fats and oils	42%	24%	33%
7	Wood products	54%	17%	29%
8	Nonmetallic minerals n.e.c.	28%	18%	54%
9	Mixed freight	63%	16%	21%
10	Coal	96%	4%	0%
11	Gasoline and aviation turbine fuel	28%	16%	56%
12	Commodity unknown	3%	2%	95%
13	Fuel oils	25%	16%	59%
14	Cereal grains	44%	48%	8%
15	Machinery	27%	4%	69%
16	Articles of base metal	50%	7%	43%
17	Other agricultural products	41%	14%	45%
18	Alcoholic beverages	43%	3%	54%
19	Milled grain products and preparations, bakery products	31%	48%	21%
20	Printed products	44%	28%	28%
	All Other Commodities	52%	14%	33%
	Grand Total	34%	13%	54%

Direction for Top Commodities - Value

Rank	Commodity Class	Inbound	Outbound	Intraregional
1	Electronic and other electrical equipment and components and office equipment	44%	31%	25%
2	Machinery	16%	5%	79%
3	Mixed freight	67%	12%	21%
4	Pharmaceutical products	39%	25%	36%
5	Textiles, leather, and articles of textiles or leather	45%	27%	28%
6	Motorized and other vehicles (including parts)	57%	11%	31%
7	Miscellaneous manufactured products	57%	22%	21%
8	Other prepared foodstuffs and fats and oils	46%	25%	28%
9	Articles of base metal	44%	10%	46%
10	Precision instruments and apparatus	54%	10%	36%
11	Plastics and rubber	70%	18%	13%
12	Basic chemicals	15%	4%	81%
13	Coal and petroleum products, n.e.c. (includes natural gas)	66%	2%	32%
14	Chemical products and preparations, n.e.c.	53%	21%	26%
15	Nonmetallic mineral products	44%	16%	40%
16	Commodity unknown	3%	2%	95%
17	Furniture, mattresses and mattress supports, lamps, lighting fittings, and illuminated signs	54%	13%	33%
18	Printed products	41%	34%	25%
19	Wood products	56%	14%	30%
20	Meat, fish, seafood, and their preparations	48%	15%	37%
	All Other Commodities	42%	15%	43%
	Grand Total	44%	17%	39%

Top Commodities Handled by Truck

Top Tonnage Commodities	Thousands of Tons	Top Value Commodities	Millions of Dollars
Gravel	36,668	Machinery	26,318
Waste/scrap	31,231	Mixed freight	20,820
Nonmetal min. prods.	23,949	Electronics	17,910
Natural sands	8,723	Pharmaceuticals	13,208
Other foodstuffs	7,432	Motorized vehicles	9,244
Wood prods.	7,202	Textiles/leather	8,980
Mixed freight	7,061	Other foodstuffs	8,191
Nonmetallic minerals	6,925	Articles-base metal	7,233
Gasoline	5,549	Misc. mfg. prods.	7,221
Coal and petroleum prods. - n.e.c.	4,865	Basic chemicals	5,631

Top Commodities Handled by Rail

Top Tonnage Commodities	Thousands of Tons	Top Value Commodities	Millions of Dollars
Coal	5,864	Electronics	305
Waste/scrap	1,029	Coal	280
Nonmetal min. prods.	984	Other foodstuffs	200
Cereal grains	597	Basic chemicals	171
Wood prods.	432	Plastics/rubber	165
Coal and petroleum prods. – n.e.c.	343	Wood prods.	152
Basic chemicals	313	Cereal grains	109
Plastics/rubber	199	Chemical prods.	100
Nonmetallic minerals	157	Base metals	92
Other foodstuffs	155	Machinery	92

Top Commodities Handled by Air

Top Tonnage Commodities	Thousands of Tons	Top Value Commodities	Millions of Dollars
Electronics	37	Electronics	2,906
Printed prods.	12	Precision instruments	1,258
Motorized vehicles	4	Textiles/leather	330
Textiles/leather	4	Nonmetal min. prods.	216
Precision instruments	2	Misc. mfg. prods.	180
Misc. mfg. prods.	2	Pharmaceuticals	108
Pharmaceuticals	2	Transport equip.	87
Articles-base metal	1	Printed prods.	62
Machinery	1	Machinery	54
Transport equip.	1	Motorized vehicles	42

Summary of Regional Freight Flows by Tonnage

thousands of tons - 2007

Mode	Inbound	Outbound	Intraregional	Through*	Total
Truck	48,690	24,544	109,810	116,144	299,188
Multiple Modes & Mail	6,559	909	24	14,791	22,283
Rail	9,232	1,520	0	37,240	47,991
Air	35	34	0	N/A	68
Water	100	2	0	N/A	102
Pipeline	5,675	31	3,355	unknown	9,061
Other / Unknown	641	133	400	unknown	1,174
Total	70,931	27,173	113,589	168,174	379,867

* Values for through freight are estimates based on MWCOG staff determination of FAF³ origin-destination pairs that are likely to result in a National Capital Region through trip.

Summary of Regional Freight Flows by Value

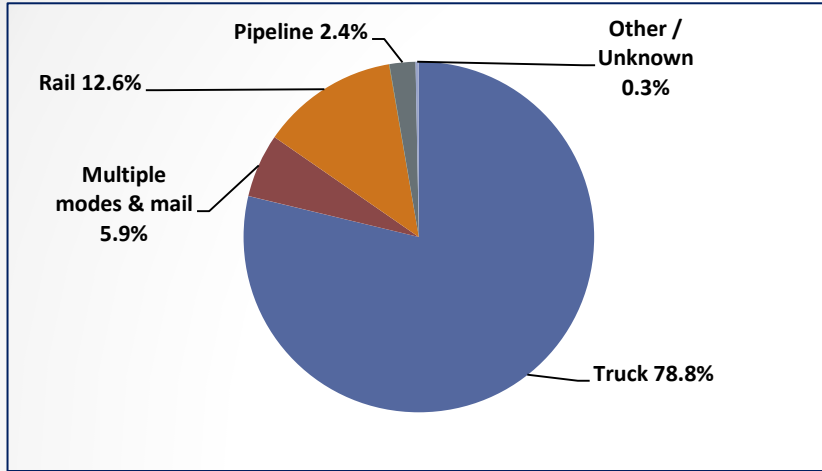
Millions of dollars - 2007

Mode	Inbound	Outbound	Intraregional	Through*	Total
Truck	70,469	30,179	88,550	257,359	446,557
Multiple Modes & Mail	25,617	8,124	3,212	88,542	125,495
Rail	1,932	267	0	17,847	20,047
Air	3,802	1,519	0	N/A	5,321
Water	36	0	0	N/A	36
Pipeline	2,046	11	1,048	unknown	3,105
Other / Unknown	1,993	1,100	805	unknown	3,899
Total	105,896	41,200	93,616	363,748	604,460

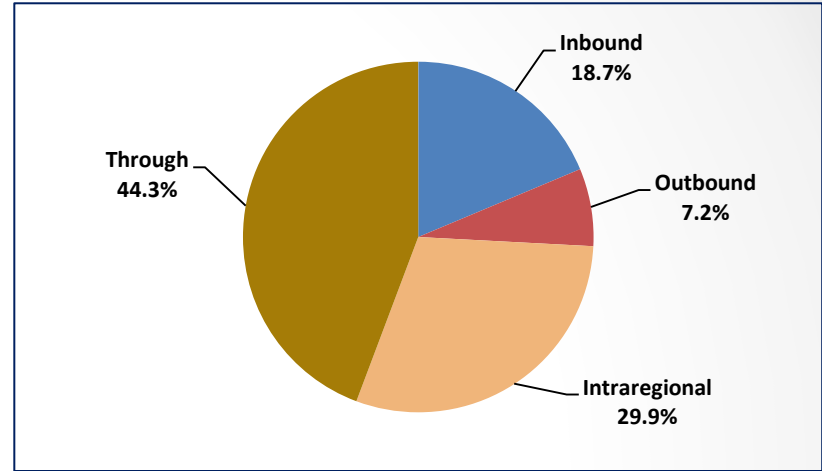
* Values for through freight are estimates based on MWCOG staff determination of FAF³ origin-destination pairs that are likely to result in a National Capital Region through trip.

Regional Freight Tonnage and Value by Mode and Direction

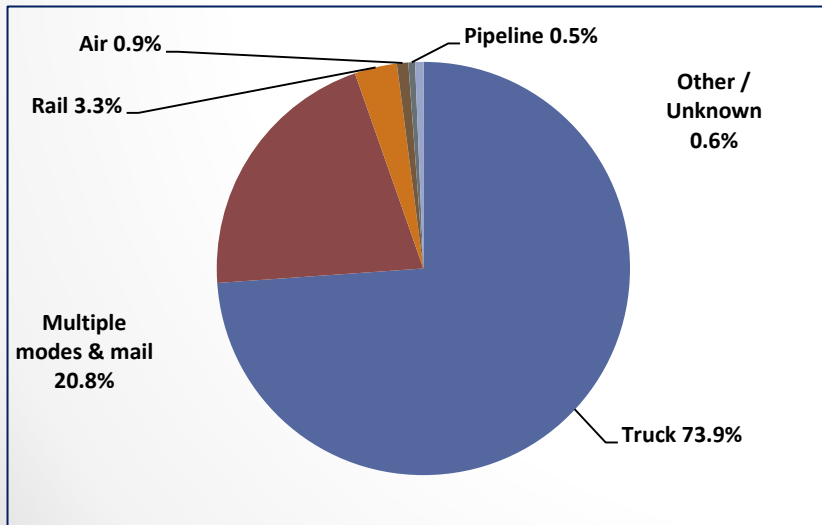
Tonnage - Mode



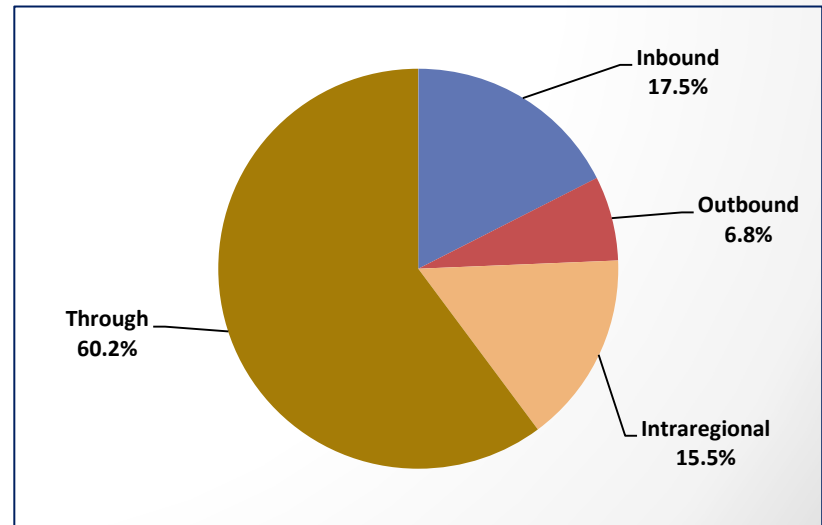
Tonnage - Direction



Value - Mode



Value - Direction



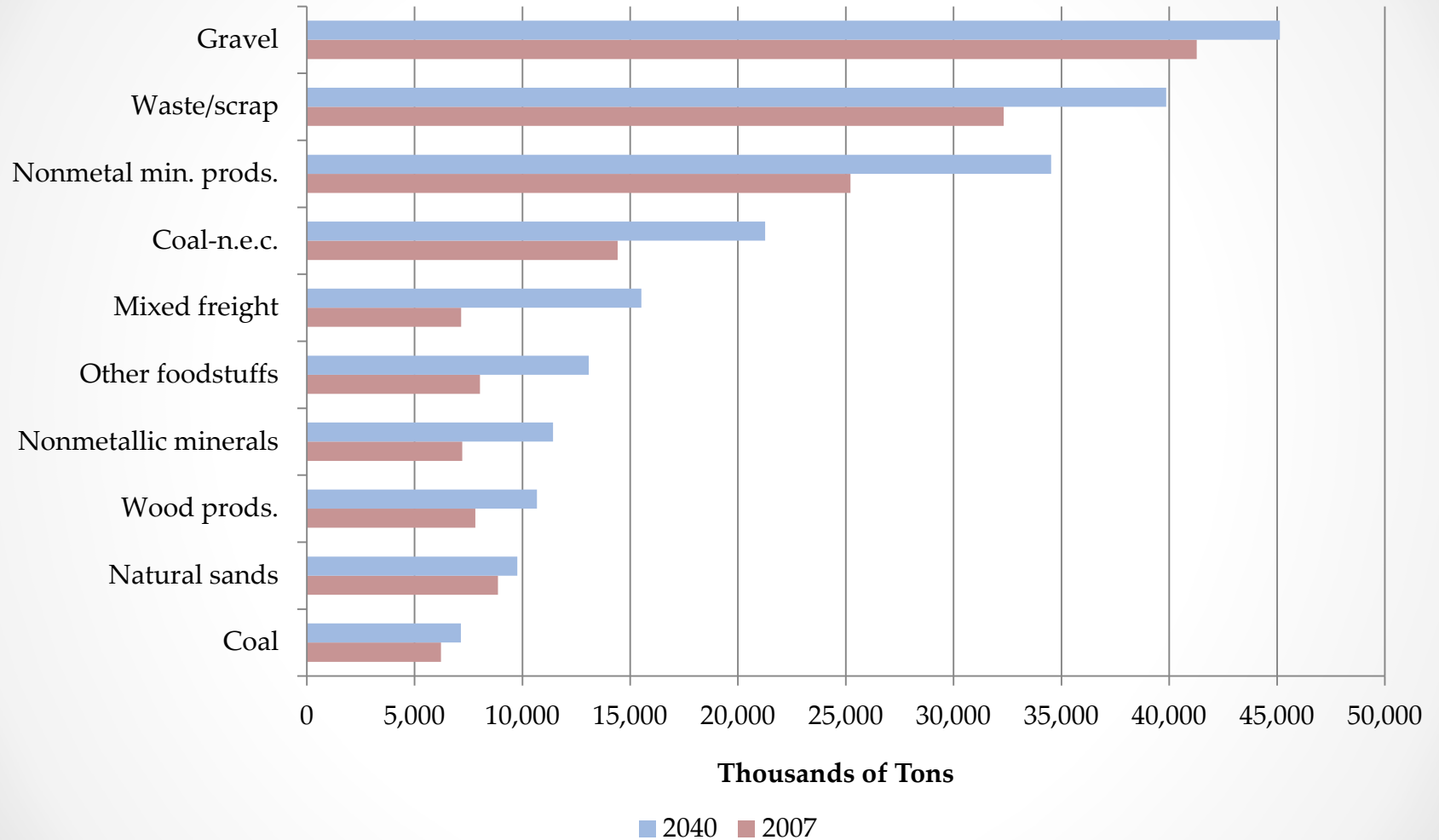
Top Trading Partner Regions by Tonnage

Rank	Partner Region	Thousands of Tons	Percent	Cumulative Percent
1	Baltimore MSA	20,673	21%	21%
2	West Virginia	10,940	11%	32%
3	Remainder of Virginia	10,113	10%	43%
4	Remainder of Pennsylvania	7,226	7%	50%
5	Richmond MSA	6,132	6%	56%
6	Remainder of Maryland	5,466	6%	62%
7	Norfolk MSA	4,382	4%	66%
8	New York CSA	3,608	4%	70%
9	Philadelphia CSA	3,310	3%	73%
10	Houston CSA	2,619	3%	76%

Top Trading Partner Regions by Value

Rank	Partner Region	Millions of Dollars	Percent	Cumulative Percent
1	Baltimore MSA	20,959	14%	14%
2	New York CSA	12,334	8%	23%
3	Remainder of Pennsylvania	8,323	6%	28%
4	Philadelphia CSA	6,928	5%	33%
5	Remainder of Virginia	6,531	4%	37%
6	Los Angeles CSA	6,084	4%	42%
7	Richmond MSA	5,742	4%	45%
8	Memphis MSA	3,903	3%	48%
9	Norfolk MSA	3,560	2%	51%
10	Chicago CSA	2,757	2%	52%

Forecasted Growth by Tonnage



Forecasted Growth by Value

