

**BEFORE THE
SURFACE TRANSPORTATION BOARD**

ENTERED
Office of Proceedings
January 10, 2020
Part of
Public Record

STB Ex Parte No. 756

MARKET DOMINANCE STREAMLINED APPROACH

REPLY COMMENTS OF CN

The U.S. rail operating subsidiaries of Canadian National Railway Company (collectively herein “CN”) respectfully submit these reply comments on the Notice of Proposed Rulemaking (“NPRM”) that the Board served on September 12, 2019 in the above-captioned proceeding.¹ On opening, CN submitted detailed, data-supported evidence regarding the distance factor proposed by the Board. As CN explained on opening, it is critical that the Board consider data like this before reaching generally applicable conclusions about when competition is effective. CN supplements its opening submission here with commodity-specific figures.

The Board proposed a series of *prima facie* factors to assist it in the jurisdictional market dominance determination in a particular rate case. One proposed factor was to require *prima facie* evidence that the challenged movement had a distance of more than 500 highway miles, which the Board proposed as a proxy to identify a distance beyond which trucking would not be likely to provide effective competition. That is to say, if a traffic lane were greater than 500 miles between origin and destination, the Board would assume—subject to rebuttal—that the lane is not truck competitive.²

¹ CN also joins the reply comments of the Association of American Railroads.

² See NPRM at 7-8.

On opening, CN responded to the Board's proposal with an analysis by Dr. Michael W. Tretheway, Chief Economist and Executive Vice President of InterVISTAS Consulting, of publicly available data on rail and truck market share drawn from the United States Census Bureau Commodity Flow Survey.³ This data showed that trucks transport the majority of traffic that moves less than 500 miles, and that truck and rail have roughly equal market shares for tonnage that moves between 500 and 750 miles. If the Board were to adopt a mileage threshold for its proposed *prima facie* approach, therefore, the data easily supports a minimum distance of 500 miles, and indeed it suggests that 750 miles would be a more appropriate threshold.⁴ Such a 750-mile threshold would be consistent with the Board's commitment to "evidence-based policy and program decision-making."⁵

Since submission of its comments, CN's expert Dr. Tretheway has analyzed the Commodity Flow Survey on a commodity-specific basis. Dr. Tretheway's attached Supplement to his Verified Statement provides information on the share of tons shipped by truck, rail, and other modes over different distance bands (*e.g.*, 0-50 miles, 50-99 miles, etc.). Information is provided for the following commodity groups drawn from the 2012 Commodity Flow Survey: Agriculture; Animals; Auto & Parts; Chemicals; Coal; Ferrous & Non-Ferrous Metals; Fertilizer; Grain; Machinery; Merchandise Products; Non-Processed Forest Products; Ores & Mine Products; Processed Forest Products; Refined Petroleum Products; Stone, Gravel or

³ BNSF Railway Company also cited a U.S. Department of Transportation study to support the proposition that a 750 highway mile threshold would be more appropriate, a position with which CN agrees. See Opening Comments of BNSF Railway Company at 13.

⁴ Comments of CN at 4.

⁵ Surface Transportation Board, Budget Request Fiscal Year 2020, at 10, <https://www.stb.gov/stb/docs/Budget/STB%20FY%202020%20Budget.pdf>; Comments of CN at 2.

Sand; and other miscellaneous commodities. For each commodity group, Dr. Tretheway presents a table showing modal share at different distance bands, and a bar chart illustrating that same data.⁶ Dr. Tretheway also provides a second table for each commodity, which shows the raw data on tons shipped for each mode at each distance band. This raw data table includes a column calculating the percentage of total tons moved at each distance band. For example, for Agriculture this column shows that 48% of tons moved at distances less than 50 miles; 13% moved at distances between 50 and 99 miles, and 1% moved 2,000 miles or more. *See Supplement to Tretheway V.S. at 7.*

Dr. Tretheway's statement explains several considerations that the Board should keep in mind when analyzing this data. First, the Commodity Flow Survey is conducted every five years, and this includes some inherent time lag. 2012 is the most recent year for which Commodity Flow Survey data is available; the 2017 data will be available later in 2020. *See id.* at 1 & n.1. While there are steps that the Board can take to mitigate this time lag,⁷ some time lag is unavoidable. Second, certain distance bands have relatively small sample sizes that can lead to anomalous results. Dr. Tretheway uses ores and mine products as an example where very small sample sizes produce some anomalous results, particularly at longer distances. *See id.* at 2. In general, however, this data set provides strong evidence of robust truck-rail competition for many commodities over many distance bands, and provides a solid foundation for the Board to develop evidence-supported

⁶ Dr. Tretheway also presents an aggregated table across all commodity groups.

⁷ The Board could perform an updated analysis when the 2017 Commodity Flow Survey is available, and every five years thereafter it could appropriately adjust the threshold to reflect the most recent Commodity Flow Survey data.

estimates of the distances at which trucks can be assumed to provide effective competition.

The data suggests a few different paths forward for the Board to rely on real-world evidence in setting a truck mileage threshold in this proceeding. One supportable approach would be for the Board to set a 750-mile threshold based on the aggregate data, which shows robust truck-rail competition for movements with a distance less than 750 miles. Another approach would be to apply a commodity-group-specific threshold that sets the distance threshold for each commodity group at the longest distance for which the amount of tons shipped by truck exceeds or is comparable to the amount shipped by rail. For example, a majority of Processed Forest Product tonnage is moved by truck up to 1,499 miles.⁸ Therefore, the *prima facie* distance factor for processed forest products should not apply to any movement of that commodity below 1,499 miles. In other words, the Board should not assume for purposes of the expedited market dominance procedure that trucks could not provide effective competition for Processed Forest Product movements that are less than 1,499 miles. (Shippers would be free to argue that the railroad was nevertheless market dominant for movements at shorter distances, but the data does not support any presumption that truck competition at those distances is not effective.) By contrast, Coal tonnage is almost evenly split between truck and rail at 99 miles and below,⁹ so the *prima facie* factor for truck competition would not be applied to coal movements of less than 100 miles.

* * *

⁸ See Supplement to Tretheway V.S. at 14.

⁹ *Id.* at 6.

In finalizing its market dominance proposal, the Board should rely on the type of real-world data put forth by CN to establish an appropriate *prima facie* factor for truck competitive movements.

Respectfully submitted,

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Dated: January 10, 2020

Supplement Verified Statement

Of

Dr. Michael W. Tretheway

January 10, 2020

Contains Color Images

Statement of identity

My name is Michael William Tretheway. I have been engaged by counsel for the US rail operating subsidiaries of the Canadian National Railway Company (CN) to provide factual information on the market share of different transportation modes in the shipment of goods. I understand that this is to be submitted as part of CN's reply comments in *Market Dominance Streamlined Approach*, STB Docket Ex Parte 756. I reviewed the STB's decision dated September 12, 2019.

I provided a verified statement in this proceeding dated November 12, 2019 which provided my curriculum vitae.

Question I address

In my previous Verified Statement, I provided analysis of publicly available data on the shipment traffic shares of rail and truck drawn from the United States Census Bureau Commodity Flow Survey. This data showed that trucking transports the majority of traffic that moves less than 500 miles, and that truck and rail have roughly equal market shares for tonnage that moves between 500 and 750 miles (39% truck, 43% rail, 18% other modes and intermodal combinations).

Subsequent to my previous Verified Statement, I have undertaken additional analysis that has allowed me to look at mode shares by commodity group. I provide that information in this statement.

Source of the data

To address the question using publicly available data, I utilized the U.S. Census Bureau's Commodity Flow Survey (CFS), a component of the Economics Census. I described this data source in my previous Verified Statement. Here, I provide tables for 2012, the most recent year for which the detailed CFS data is available.¹

Commodities examined

The CFS indicates market share of each mode and allows this to be categorized by distance band. The survey provides estimates of tons shipped, ton miles (TM) and value of shipments. I have utilized the tons shipped data to indicate market shares. While TM is another commonly used traffic measure for transportation services, because I categorize market shares by distance band, my tons-based market shares are roughly indicative of TM market shares.

In this statement, I provide the mode share by distance band for the following commodity groups which I constructed:²

- Autos & Parts
- Chemicals

¹ Data for 2007, by commodity, can also be calculated. Such data do not reveal any substantive shifts in traffic shares. Data for 2017 will be available later in 2020.

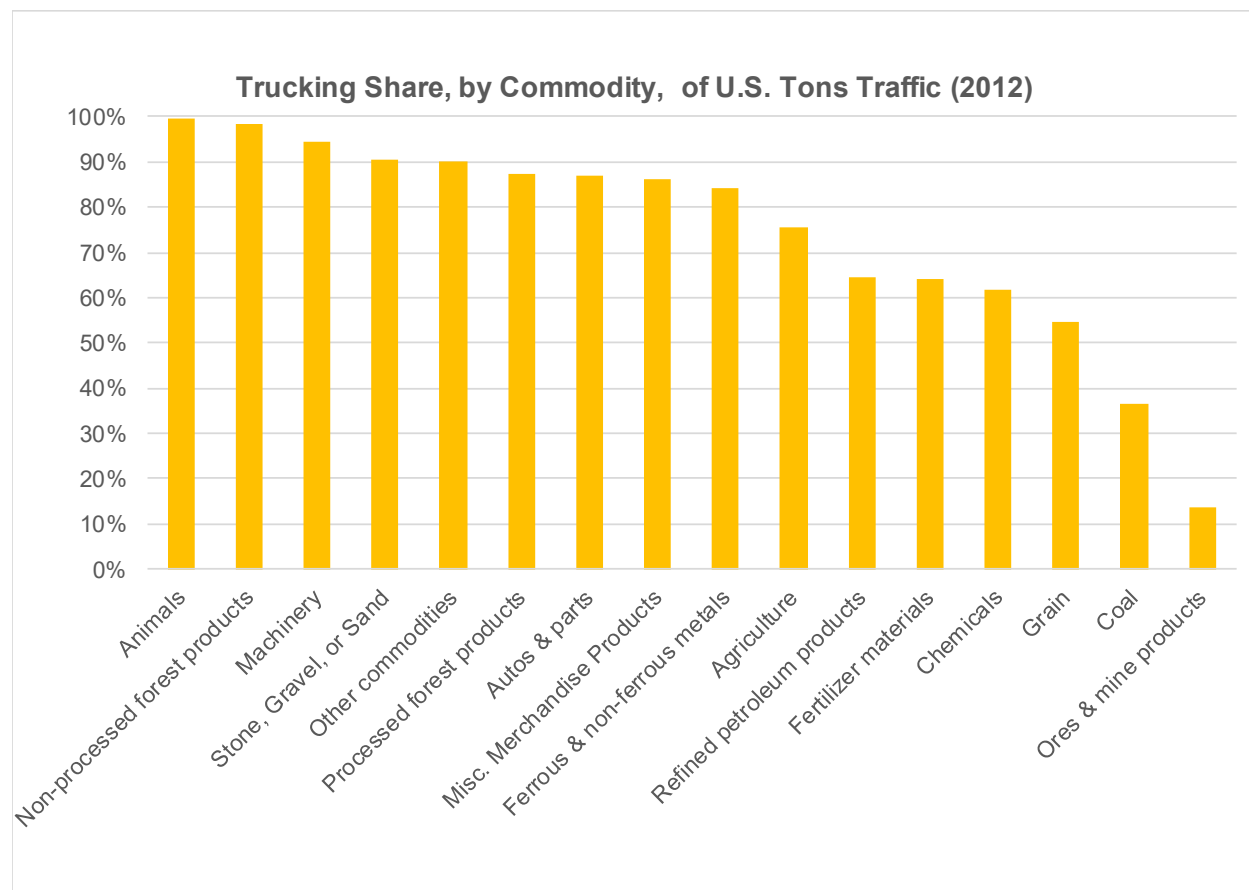
² The CFS does not define commodity groups in the same way that the STB does. Appendix 2 provides information on how I constructed the commodity groups. I note that as commodity groups are defined more narrowly, some data is lost as the CFS will suppress data (not display data) when the number of observations is so few that it would reveal shipper identity.

- Coal
- Ferrous & Non-Ferrous Metals
- Fertilizer Materials
- Grain
- Machinery
- Miscellaneous Merchandise Products
- Non-Processed Forest Products
- Ores & Mine Products
- Processed Forest Products
- Refined Petroleum Products
- Stone, Gravel or Sand
- Other commodities

In addition to the market share data, for each commodity I provide the underlying tons data. Display of the tons data provides the underlying raw data from which the market shares were calculated. It also can be an aid in order to understand some anomalies in the market shares. For example, in the ores & mine products category, in some distance bands trucking share is very high (up to 100%). However, the tons data indicates that there were few tons shipped by any mode in several distance bands. Of the relatively scant 2.8 million tons of ore and mineral products shipped at distances of 100-249 miles, in 2012 none were shipped by rail. In contrast, in the 50 to 99 mile distance band, the total shipments captured in the survey of ores & mine products amounted to 22.9 million tons, of which 89% were by rail.

Figure 1 provides a summary of trucking market share (at all distances) by commodity. Appendix 1 provides the graphs and tables of each commodity group by distance band.

Figure 1
Trucking share of total shipments
(aggregated over all distances)
by commodity group
2012
Ranked by trucking share



Source: US Census Commodity Flow Survey

VERIFICATION

I, Michael Tretheway, declare under penalty of perjury that the foregoing Verified Statement is true as stated to the best of my knowledge, information and belief.



Michael Tretheway

Chief Economist and Executive Vice President

InterVISTAS Consulting Inc.

Executed on January 10, 2020.

Appendix 1

Tables and graphs of mode shares by commodity and by distance band

Commodity mode shares by distance band

Source:

2012 Commodity Flow Survey,
US Census & Bureau of Transportation Statistics

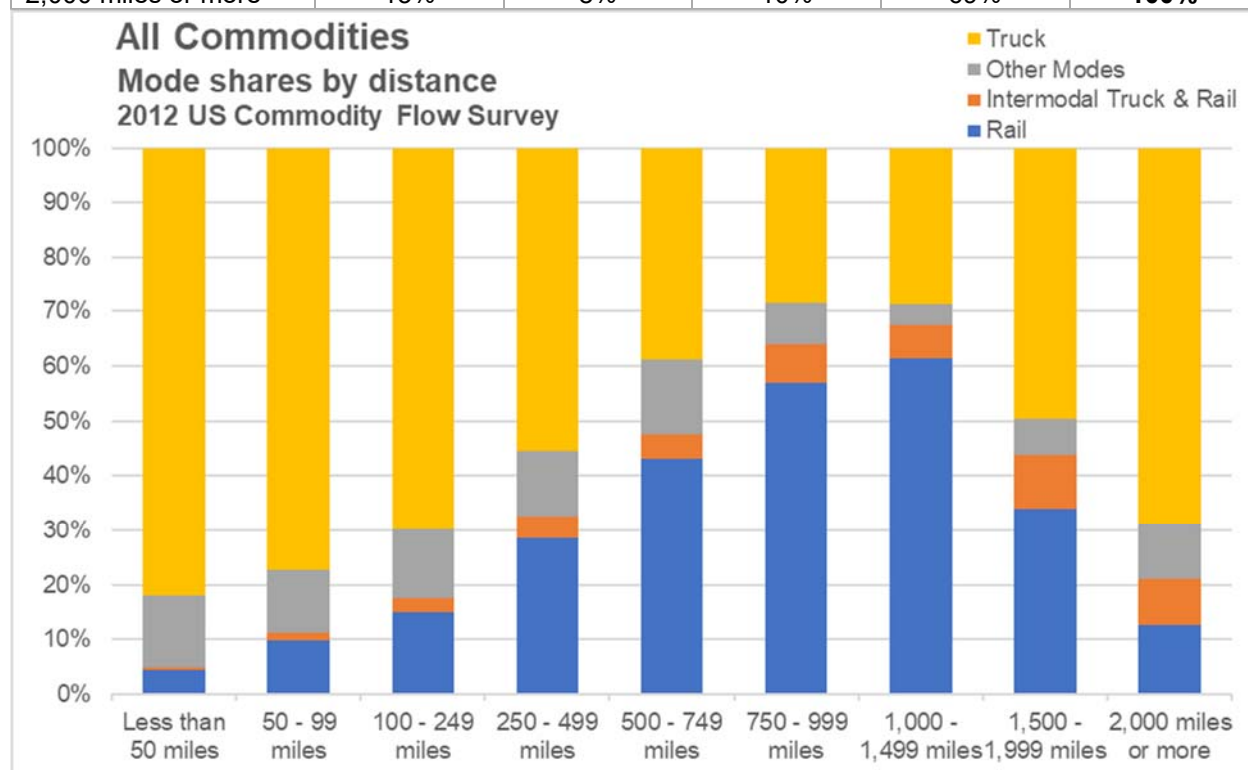
There is one table for each of 16 commodity groups,³ plus a table for all commodities.

- The mode shares in the top table for each commodity are based on the shipment tons data in the bottom table.
- The table at the bottom is for thousands of tons shipped.
- The rightmost column in the tons table at the bottom gives the share of the total tons, across all modes, for the distance band on the row. For example, in the Autos & Parts commodity group, 15% of total tons shipped in the CFS data is for shipments that moved between 100 and 249 miles.

³ One of which is “Other commodities”, which includes any shipments in the CFS not assigned to the other 15 commodity groups

All Commodities in 2012 Survey

Distance Band	Mode of Transportation				
	Rail	Intermodal Truck & Rail	Other Modes	Truck	Row Total
Less than 50 miles	4%	0%	13%	82%	100%
50 - 99 miles	10%	1%	12%	77%	100%
100 - 249 miles	15%	3%	13%	70%	100%
250 - 499 miles	29%	4%	12%	55%	100%
500 - 749 miles	43%	4%	14%	39%	100%
750 - 999 miles	57%	7%	8%	28%	100%
1,000 - 1,499 miles	61%	6%	4%	29%	100%
1,500 - 1,999 miles	34%	10%	6%	50%	100%
2,000 miles or more	13%	8%	10%	69%	100%

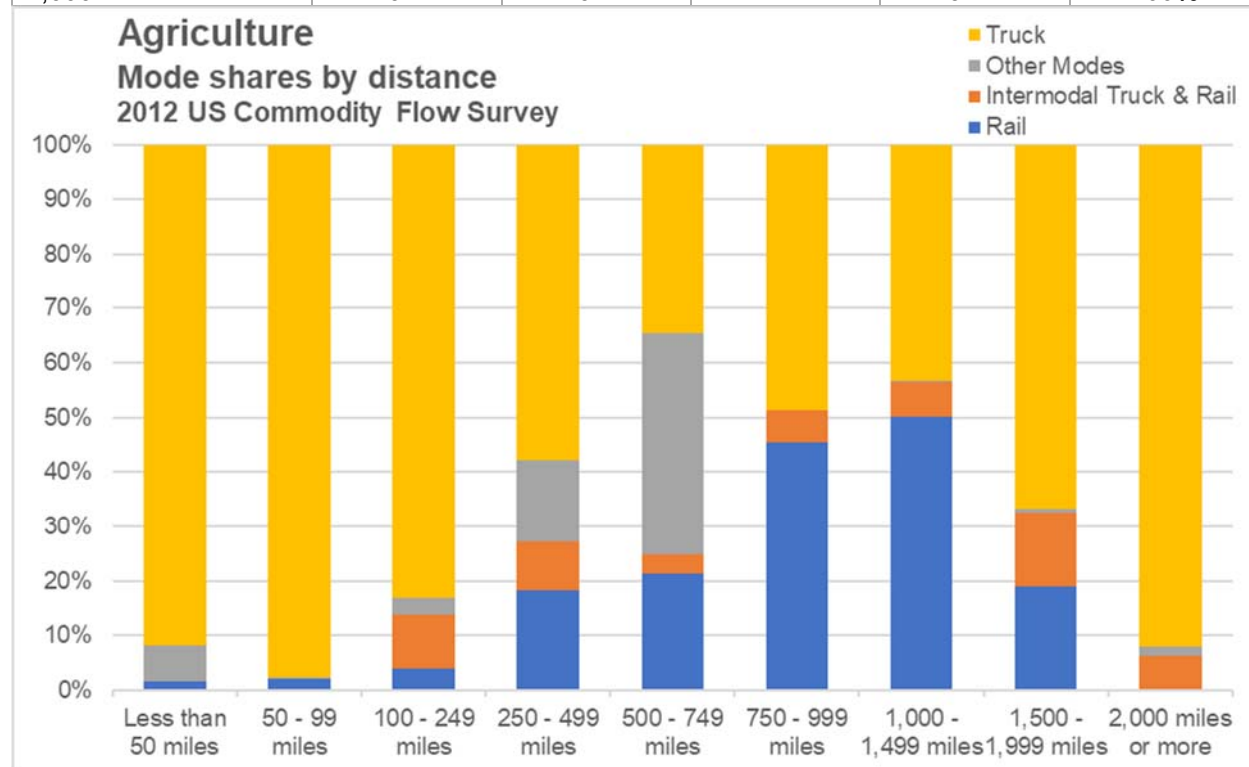


Distance Block	Rail	Intermodal Truck & Rail	Other Modes	Truck	Row % of Total
Less than 50 miles	279,879	30,554	827,311	5,177,784	56%
50 - 99 miles	111,698	15,169	131,806	881,039	10%
100 - 249 miles	200,457	36,027	169,288	933,051	12%
250 - 499 miles	271,773	37,567	113,557	526,850	8%
500 - 749 miles	253,876	26,222	80,225	229,177	5%
750 - 999 miles	247,553	31,156	32,838	123,767	4%
1,000 - 1,499 miles	222,520	22,864	13,247	104,277	3%
1,500 - 1,999 miles	34,663	10,164	6,603	50,850	1%
2,000 miles or more	6,119	4,090	4,849	33,369	0%

Data in table above are in thousands of tons. Source: Commodity Flow Survey

Agriculture

Distance Band	Rail	Intermodal Truck & Rail	Other Modes	Truck	Row Total
Less than 50 miles	1%	0%	6%	92%	100%
50 - 99 miles	2%	0%	0%	98%	100%
100 - 249 miles	4%	10%	3%	83%	100%
250 - 499 miles	18%	9%	15%	58%	100%
500 - 749 miles	21%	4%	41%	35%	100%
750 - 999 miles	46%	6%	0%	49%	100%
1,000 - 1,499 miles	50%	6%	0%	43%	100%
1,500 - 1,999 miles	19%	14%	1%	67%	100%
2,000 miles or more	0%	6%	2%	92%	100%

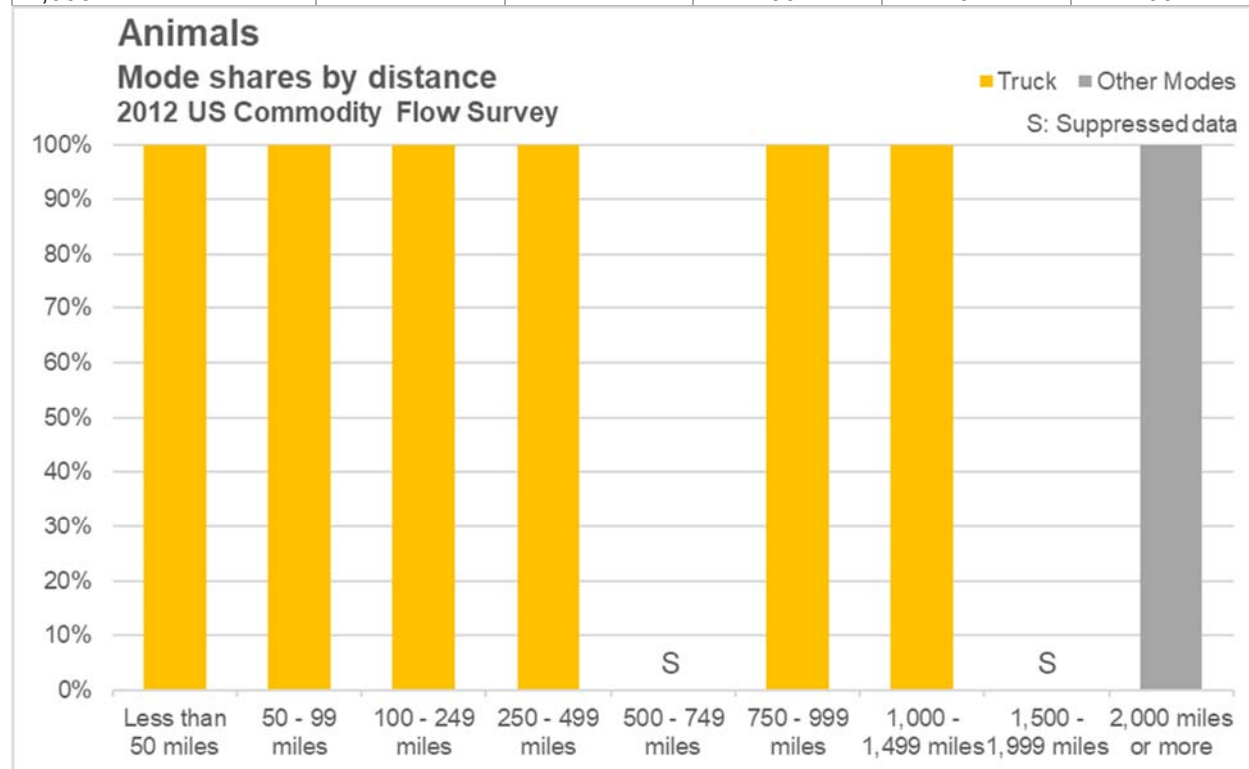


Distance Block	Rail	Intermodal Truck & Rail	Other Modes	Truck	Row % of Total
Less than 50 miles	3,061	449	13,377	189,304	48%
50 - 99 miles	1,204	-	28	54,302	13%
100 - 249 miles	2,201	5,473	1,734	46,408	13%
250 - 499 miles	7,673	3,729	6,342	24,302	10%
500 - 749 miles	6,055	1,009	11,587	9,863	7%
750 - 999 miles	6,215	781	17	6,632	3%
1,000 - 1,499 miles	9,351	1,198	42	8,085	4%
1,500 - 1,999 miles	1,150	842	38	4,066	1%
2,000 miles or more	-	170	45	2,534	1%

Data in table above are in thousands of tons. Source: Commodity Flow Survey

Animals

Distance Band	Rail	Intermodal Truck & Rail	Other Modes	Truck	Row Total
Less than 50 miles	Suppressed/ No data	No Data	0%	100%	100%
50 - 99 miles			0%	100%	100%
100 - 249 miles			0%	100%	100%
250 - 499 miles			0%	100%	100%
500 - 749 miles			S	S	S
750 - 999 miles			0%	100%	100%
1,000 - 1,499 miles			0%	100%	100%
1,500 - 1,999 miles			S	S	S
2,000 miles or more			100%	0%	100%

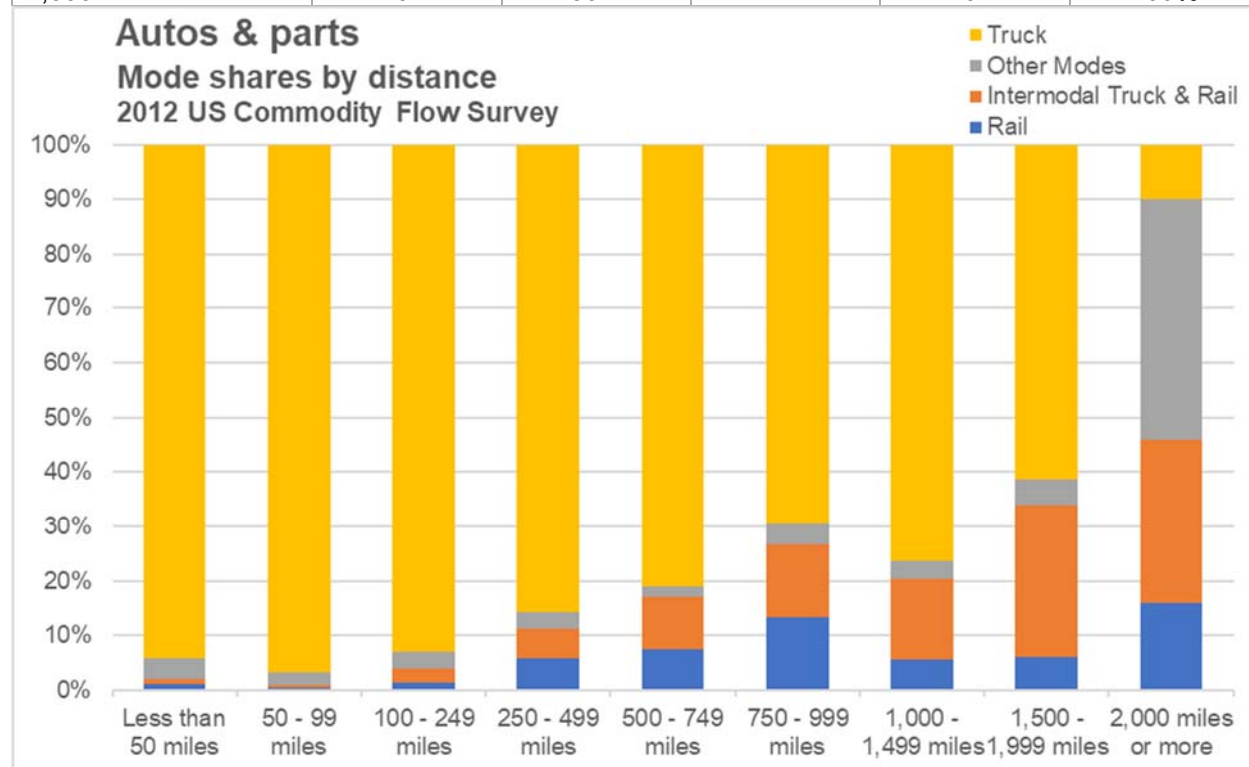


Distance Block	Rail	Intermodal Truck & Rail	Other Modes	Truck	Row % of Total
Less than 50 miles	-	-	-	237	14%
50 - 99 miles	-	-	-	237	14%
100 - 249 miles	-	-	-	332	19%
250 - 499 miles	-	-	-	300	17%
500 - 749 miles	-	-	-	-	0%
750 - 999 miles	-	-	1	360	21%
1,000 - 1,499 miles	-	-	-	265	15%
1,500 - 1,999 miles	-	-	-	-	0%
2,000 miles or more	-	-	15	-	1%

Data in table above are in thousands of tons. Source: Commodity Flow Survey

Autos & Parts

Distance Band	Rail	Intermodal Truck & Rail	Other Modes	Truck	Row Total
Less than 50 miles	1%	1%	4%	94%	100%
50 - 99 miles	1%	0%	2%	97%	100%
100 - 249 miles	1%	3%	3%	93%	100%
250 - 499 miles	6%	5%	3%	86%	100%
500 - 749 miles	8%	10%	2%	81%	100%
750 - 999 miles	13%	13%	4%	70%	100%
1,000 - 1,499 miles	6%	15%	3%	76%	100%
1,500 - 1,999 miles	6%	28%	5%	61%	100%
2,000 miles or more	16%	30%	44%	10%	100%

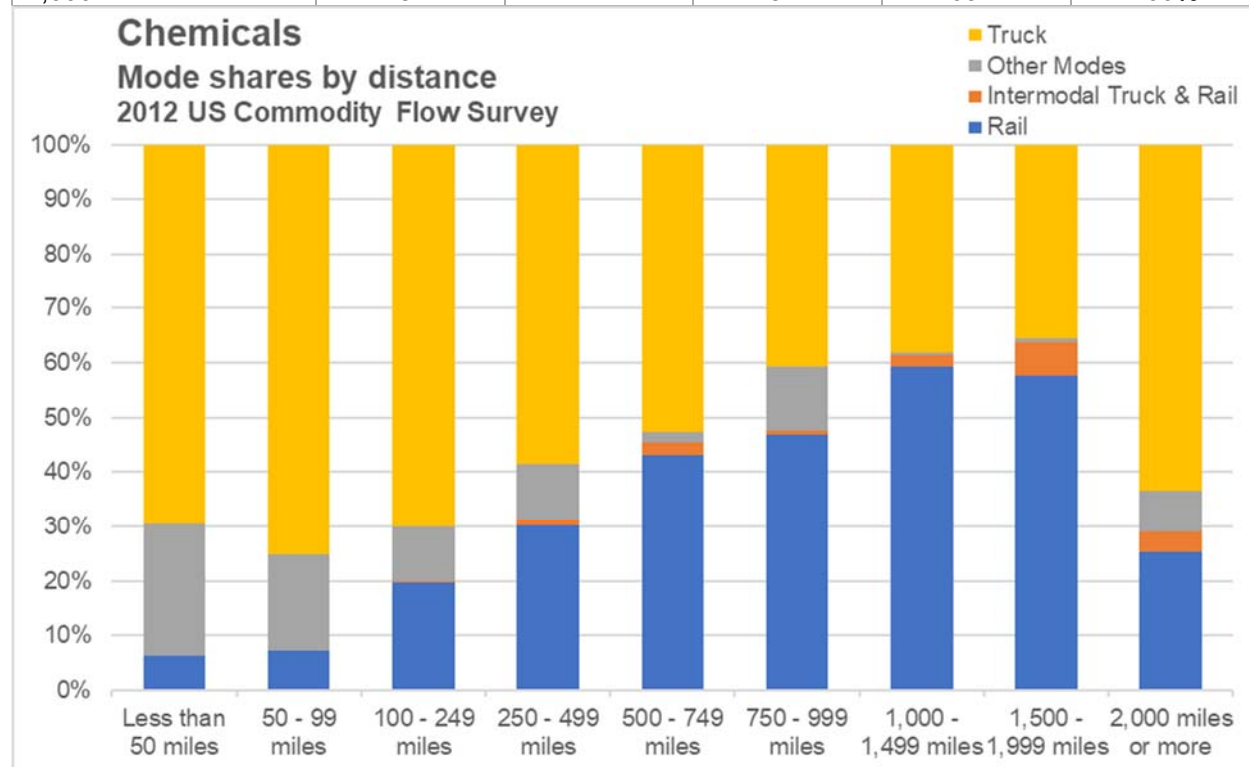


Distance Block	Rail	Intermodal Truck & Rail	Other Modes	Truck	Row % of Total
Less than 50 miles	476	367	1,410	36,823	29%
50 - 99 miles	66	48	295	12,597	10%
100 - 249 miles	269	562	584	19,096	15%
250 - 499 miles	1,299	1,178	703	19,120	17%
500 - 749 miles	1,383	1,748	365	14,848	14%
750 - 999 miles	1,103	1,084	305	5,718	6%
1,000 - 1,499 miles	442	1,183	255	6,063	6%
1,500 - 1,999 miles	252	1,166	200	2,563	3%
2,000 miles or more	83	157	231	52	0%

Data in table above are in thousands of tons. Source: Commodity Flow Survey

Chemicals

Distance Band	Rail	Intermodal Truck & Rail	Other Modes	Truck	Row Total
Less than 50 miles	6%	0%	24%	70%	100%
50 - 99 miles	7%	0%	18%	75%	100%
100 - 249 miles	20%	0%	10%	70%	100%
250 - 499 miles	30%	1%	10%	59%	100%
500 - 749 miles	43%	2%	2%	53%	100%
750 - 999 miles	47%	1%	12%	41%	100%
1,000 - 1,499 miles	59%	2%	1%	38%	100%
1,500 - 1,999 miles	58%	6%	1%	36%	100%
2,000 miles or more	25%	4%	8%	63%	100%

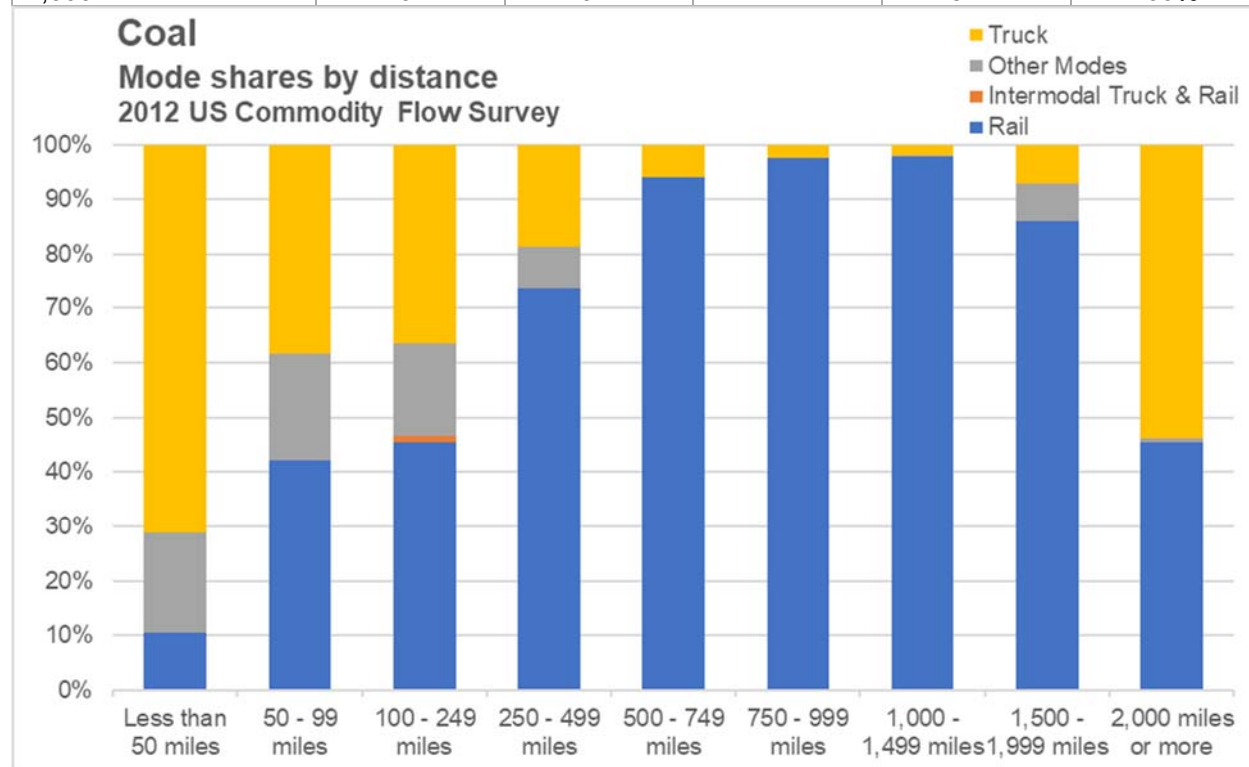


Distance Block	Rail	Intermodal Truck & Rail	Other Modes	Truck	Row % of Total
Less than 50 miles	9,548	-	36,488	105,567	35%
50 - 99 miles	3,976	32	9,816	41,696	13%
100 - 249 miles	13,886	262	7,099	49,527	16%
250 - 499 miles	18,205	492	6,143	35,188	14%
500 - 749 miles	16,575	915	723	20,316	9%
750 - 999 miles	13,533	261	3,375	11,763	7%
1,000 - 1,499 miles	12,594	404	126	8,074	5%
1,500 - 1,999 miles	5,344	566	61	3,288	2%
2,000 miles or more	668	100	199	1,674	1%

Data in table above are in thousands of tons. Source: Commodity Flow Survey

Coal

Distance Band	Rail	Intermodal Truck & Rail	Other Modes	Truck	Row Total
Less than 50 miles	11%	0%	18%	71%	100%
50 - 99 miles	42%	0%	19%	38%	100%
100 - 249 miles	45%	1%	17%	36%	100%
250 - 499 miles	74%	0%	8%	19%	100%
500 - 749 miles	94%	0%	0%	6%	100%
750 - 999 miles	98%	0%	0%	2%	100%
1,000 - 1,499 miles	98%	0%	0%	2%	100%
1,500 - 1,999 miles	86%	0%	7%	7%	100%
2,000 miles or more	46%	0%	1%	54%	100%

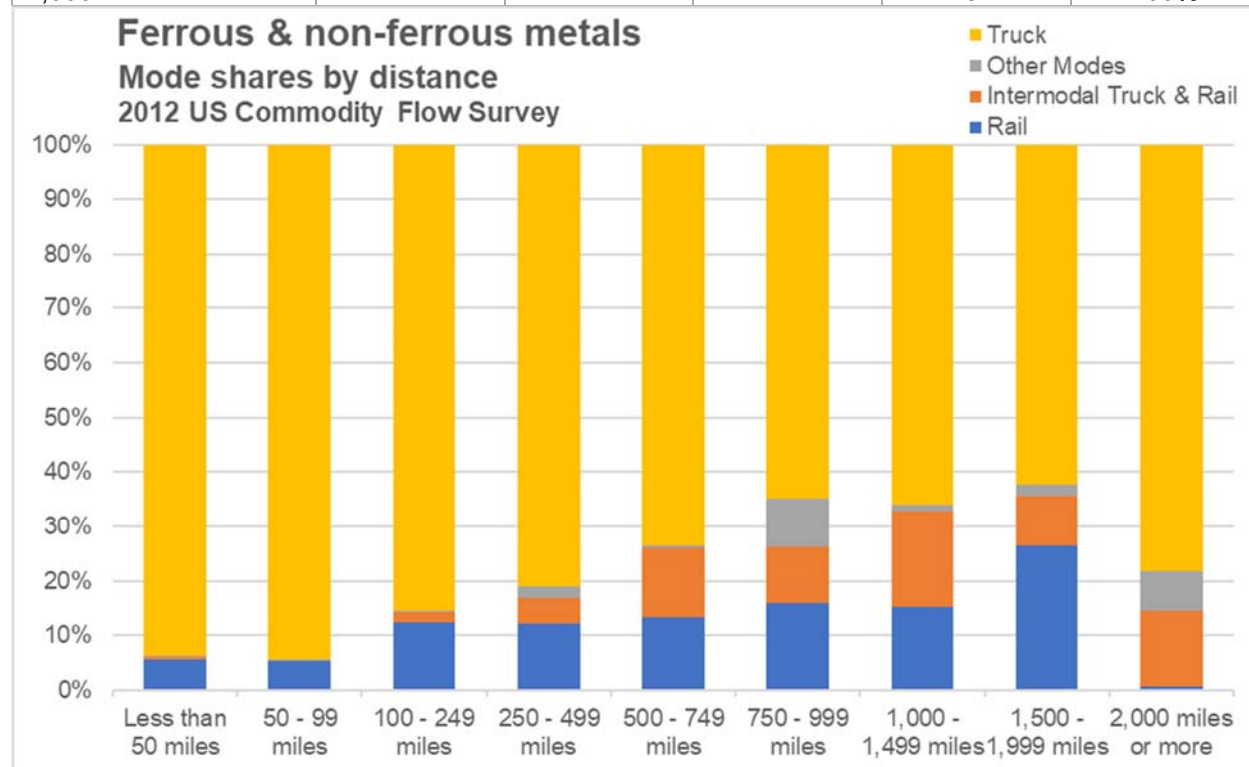


Distance Block	Rail	Intermodal Truck & Rail	Other Modes	Truck	Row % of Total
Less than 50 miles	58,579	-	100,544	394,570	38%
50 - 99 miles	42,193	-	19,497	38,496	7%
100 - 249 miles	86,709	2,138	32,499	69,392	13%
250 - 499 miles	134,660	-	14,063	34,264	13%
500 - 749 miles	117,648	-	11	7,508	9%
750 - 999 miles	161,793	-	-	3,996	11%
1,000 - 1,499 miles	121,958	-	215	2,450	9%
1,500 - 1,999 miles	13,498	-	1,037	1,130	1%
2,000 miles or more	154	-	2	182	0%

Data in table above are in thousands of tons. Source: Commodity Flow Survey

Ferrous & Non-Ferrous Metals

Distance Band	Rail	Intermodal Truck & Rail	Other Modes	Truck	Row Total
Less than 50 miles	6%	0%	0%	94%	100%
50 - 99 miles	5%	0%	0%	94%	100%
100 - 249 miles	12%	2%	0%	85%	100%
250 - 499 miles	12%	5%	2%	81%	100%
500 - 749 miles	13%	13%	1%	73%	100%
750 - 999 miles	16%	10%	9%	65%	100%
1,000 - 1,499 miles	15%	18%	1%	66%	100%
1,500 - 1,999 miles	26%	9%	2%	62%	100%
2,000 miles or more	1%	14%	7%	78%	100%

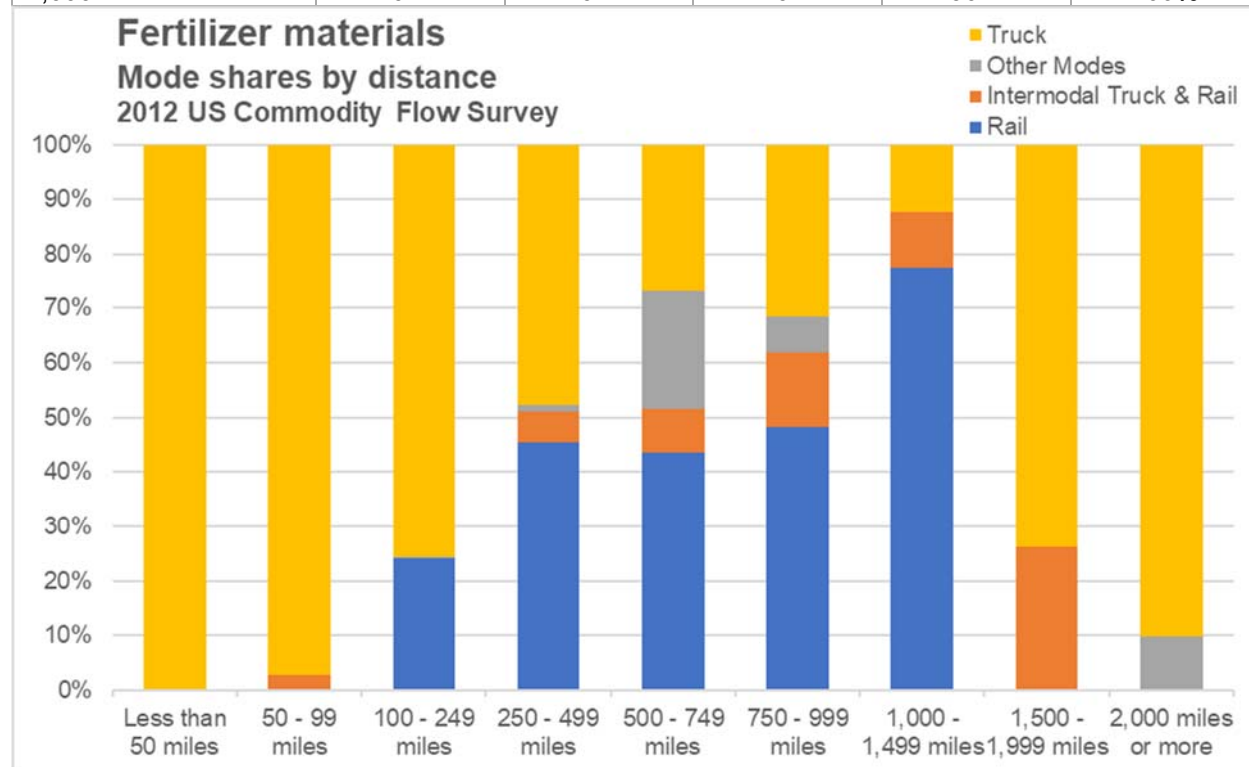


Distance Block	Rail	Intermodal Truck & Rail	Other Modes	Truck	Row % of Total
Less than 50 miles	6,555	468	248	108,401	29%
50 - 99 miles	2,345	-	109	41,895	11%
100 - 249 miles	11,265	1,768	295	78,108	23%
250 - 499 miles	9,064	3,661	1,557	60,820	19%
500 - 749 miles	4,647	4,339	220	25,460	9%
750 - 999 miles	2,810	1,801	1,571	11,386	4%
1,000 - 1,499 miles	2,118	2,458	173	9,192	3%
1,500 - 1,999 miles	1,598	561	130	3,767	2%
2,000 miles or more	16	296	157	1,691	1%

Data in table above are in thousands of tons. Source: Commodity Flow Survey

Fertilizer

Distance Band	Rail	Intermodal Truck & Rail	Other Modes	Truck	Row Total
Less than 50 miles	0%	0%	0%	100%	100%
50 - 99 miles	0%	3%	0%	97%	100%
100 - 249 miles	24%	0%	0%	76%	100%
250 - 499 miles	45%	6%	1%	48%	100%
500 - 749 miles	44%	8%	22%	27%	100%
750 - 999 miles	48%	14%	7%	32%	100%
1,000 - 1,499 miles	77%	10%	0%	12%	100%
1,500 - 1,999 miles	0%	26%	0%	74%	100%
2,000 miles or more	0%	0%	10%	90%	100%

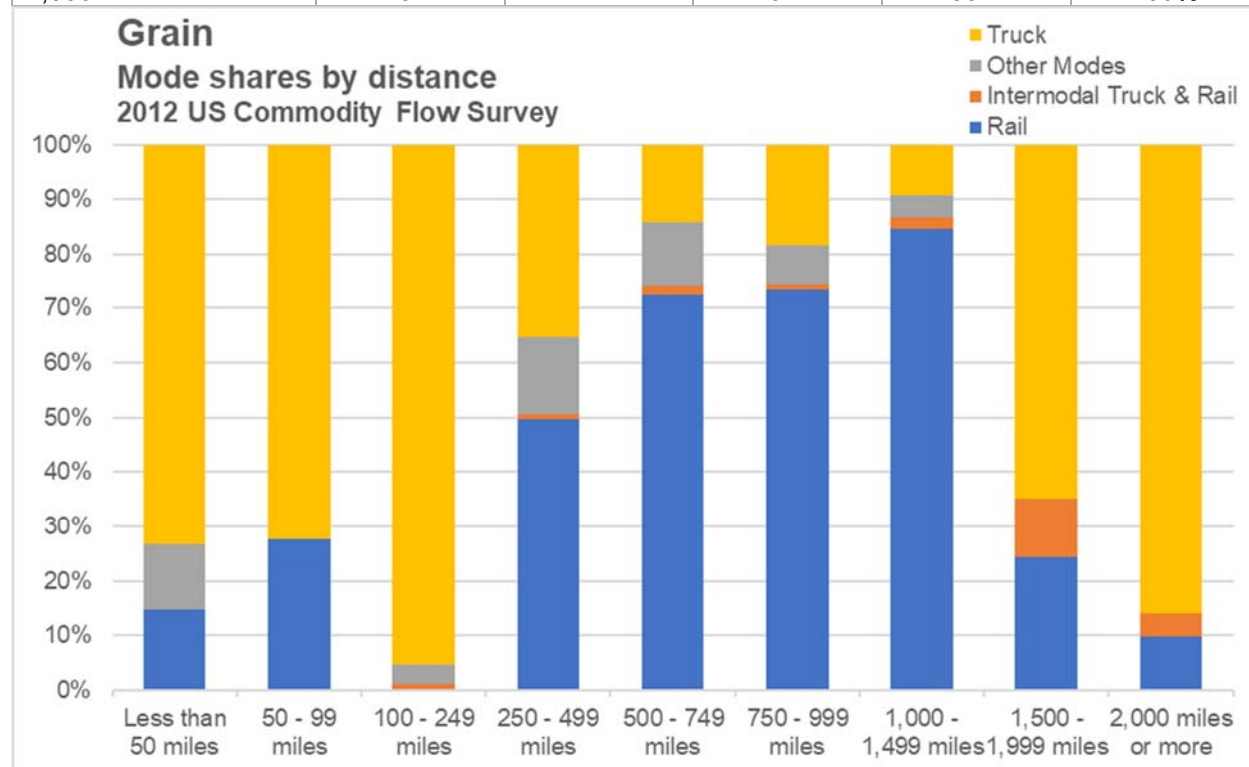


Distance Block	Rail	Intermodal Truck & Rail	Other Modes	Truck	Row % of Total
Less than 50 miles	-	-	-	65,076	43%
50 - 99 miles	-	461	-	15,780	11%
100 - 249 miles	5,787	-	52	18,246	16%
250 - 499 miles	7,969	1,018	203	8,378	12%
500 - 749 miles	5,996	1,095	2,963	3,699	9%
750 - 999 miles	3,900	1,110	526	2,556	5%
1,000 - 1,499 miles	4,501	597	-	713	4%
1,500 - 1,999 miles	-	67	-	188	0%
2,000 miles or more	-	-	10	93	0%

Data in table above are in thousands of tons. Source: Commodity Flow Survey

Grain

Distance Band	Rail	Intermodal Truck & Rail	Other Modes	Truck	Row Total
Less than 50 miles	15%	0%	12%	73%	100%
50 - 99 miles	28%	0%	0%	72%	100%
100 - 249 miles	0%	1%	4%	95%	100%
250 - 499 miles	50%	1%	14%	35%	100%
500 - 749 miles	72%	2%	12%	14%	100%
750 - 999 miles	73%	1%	7%	18%	100%
1,000 - 1,499 miles	85%	2%	4%	9%	100%
1,500 - 1,999 miles	24%	11%	0%	65%	100%
2,000 miles or more	10%	4%	0%	86%	100%

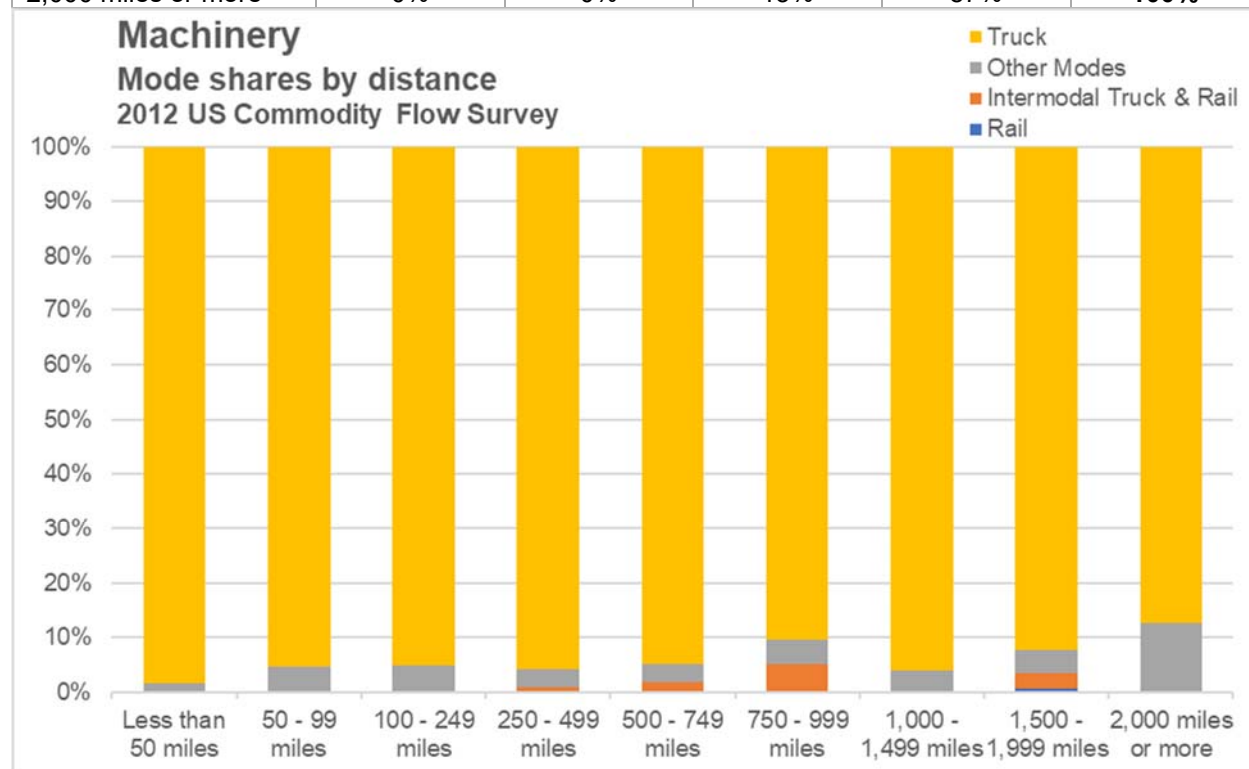


Distance Block	Rail	Intermodal Truck & Rail	Other Modes	Truck	Row % of Total
Less than 50 miles	39,211	-	31,288	193,953	48%
50 - 99 miles	16,384	-	1	43,059	11%
100 - 249 miles	-	460	1,609	41,697	8%
250 - 499 miles	23,962	545	6,714	17,079	9%
500 - 749 miles	46,576	1,149	7,469	9,142	12%
750 - 999 miles	19,738	289	1,926	4,950	5%
1,000 - 1,499 miles	29,171	709	1,351	3,182	6%
1,500 - 1,999 miles	1,148	511	2	3,073	1%
2,000 miles or more	167	72	-	1,455	0%

Data in table above are in thousands of tons. Source: Commodity Flow Survey

Machinery

Distance Band	Rail	Intermodal Truck & Rail	Other Modes	Truck	Row Total
Less than 50 miles	0%	0%	1%	98%	100%
50 - 99 miles	0%	0%	4%	95%	100%
100 - 249 miles	0%	0%	4%	95%	100%
250 - 499 miles	0%	1%	3%	96%	100%
500 - 749 miles	0%	2%	3%	95%	100%
750 - 999 miles	0%	5%	4%	90%	100%
1,000 - 1,499 miles	0%	0%	4%	96%	100%
1,500 - 1,999 miles	1%	3%	4%	92%	100%
2,000 miles or more	0%	0%	13%	87%	100%

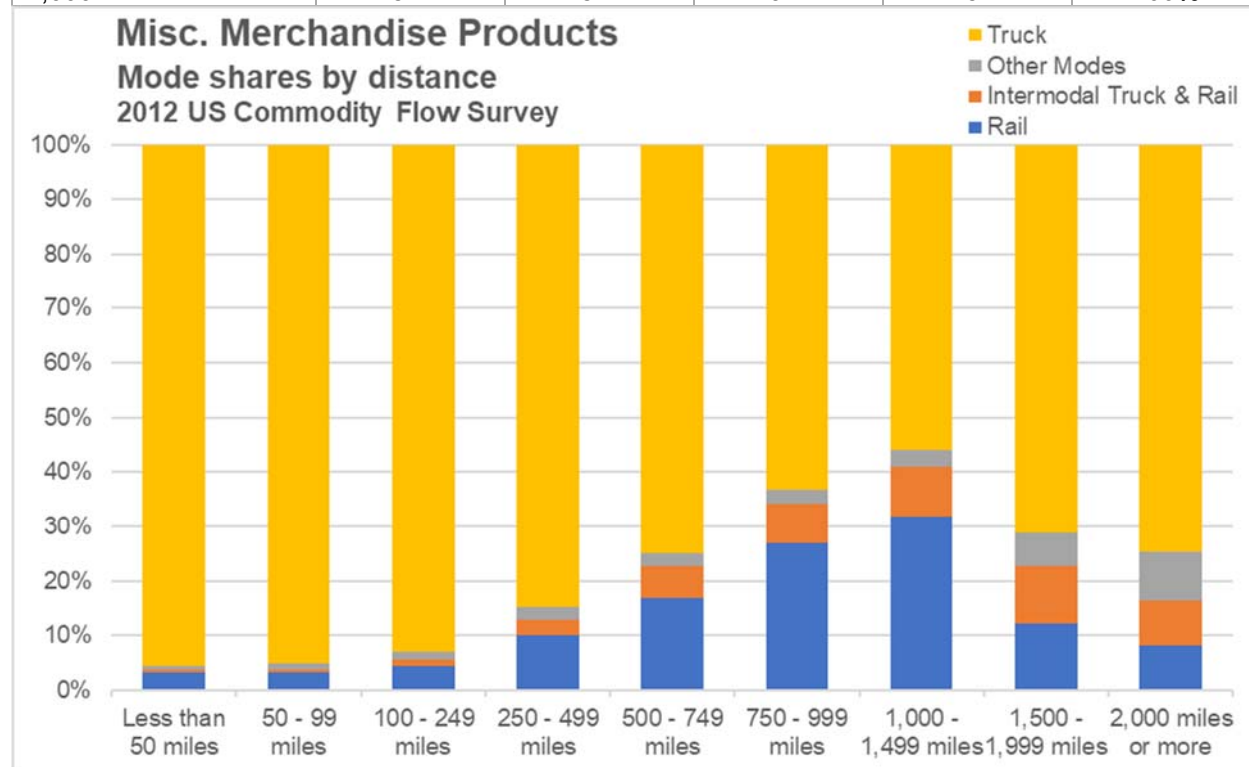


Distance Block	Rail	Intermodal Truck & Rail	Other Modes	Truck	Row % of Total
Less than 50 miles	-	34	377	26,225	36%
50 - 99 miles	-	9	241	5,170	7%
100 - 249 miles	-	27	427	9,037	13%
250 - 499 miles	19	80	352	10,196	15%
500 - 749 miles	-	132	254	7,145	10%
750 - 999 miles	-	247	210	4,307	6%
1,000 - 1,499 miles	-	-	198	4,807	7%
1,500 - 1,999 miles	21	78	120	2,596	4%
2,000 miles or more	-	-	127	885	1%

Data in table above are in thousands of tons. Source: Commodity Flow Survey

Miscellaneous Merchandise Products

Distance Band	Rail	Intermodal Truck & Rail	Other Modes	Truck	Row Total
Less than 50 miles	3%	0%	1%	96%	100%
50 - 99 miles	3%	1%	1%	95%	100%
100 - 249 miles	4%	1%	2%	93%	100%
250 - 499 miles	10%	3%	2%	85%	100%
500 - 749 miles	17%	6%	2%	75%	100%
750 - 999 miles	27%	7%	3%	63%	100%
1,000 - 1,499 miles	32%	9%	3%	56%	100%
1,500 - 1,999 miles	12%	11%	6%	71%	100%
2,000 miles or more	8%	8%	9%	75%	100%

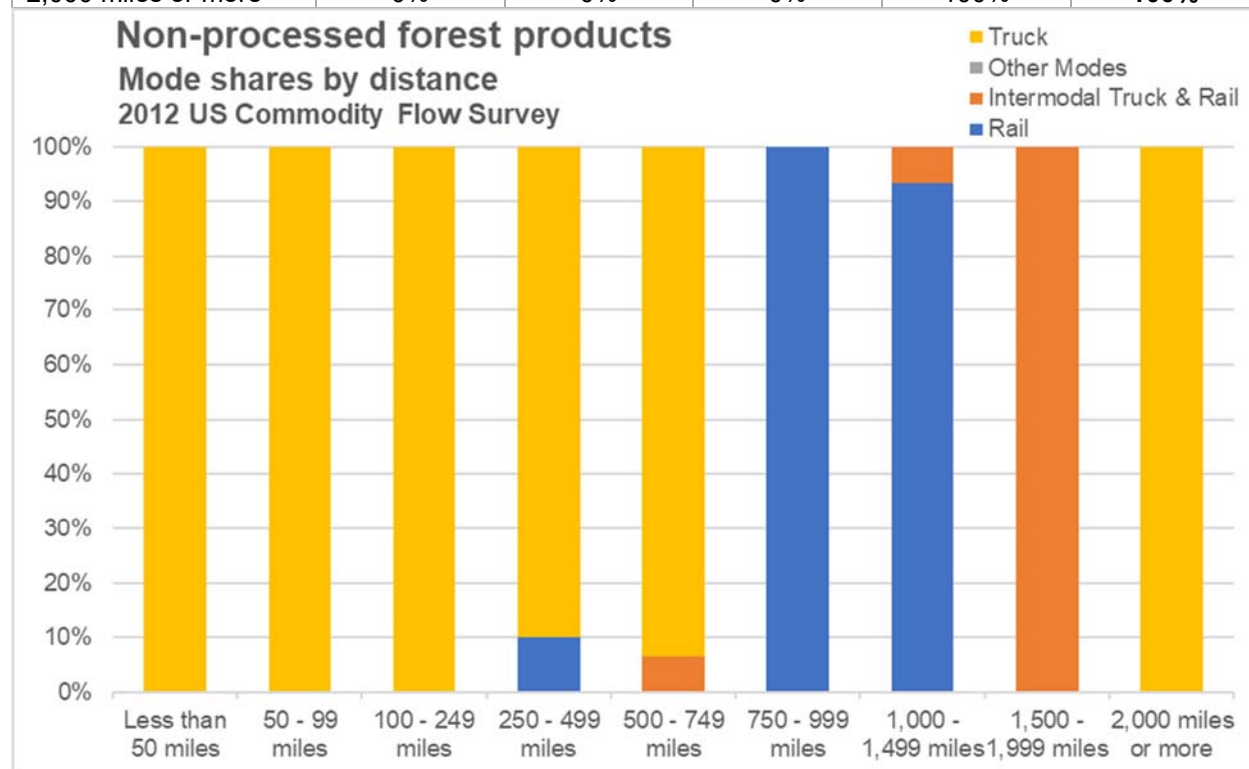


Distance Block	Rail	Intermodal Truck & Rail	Other Modes	Truck	Row % of Total
Less than 50 miles	13,415	1,564	2,631	390,587	36%
50 - 99 miles	3,397	722	1,072	103,210	10%
100 - 249 miles	8,047	1,980	2,783	170,583	16%
250 - 499 miles	15,724	4,776	3,456	134,327	14%
500 - 749 miles	16,640	5,852	2,315	74,638	9%
750 - 999 miles	18,375	5,010	1,792	43,141	6%
1,000 - 1,499 miles	21,208	6,044	2,038	37,083	6%
1,500 - 1,999 miles	3,179	2,787	1,572	18,700	2%
2,000 miles or more	1,784	1,774	1,904	16,207	2%

Data in table above are in thousands of tons. Source: Commodity Flow Survey

Non-Processed Forest Products

Distance Band	Rail	Intermodal Truck & Rail	Other Modes	Truck	Row Total
Less than 50 miles	0%	0%	0%	100%	100%
50 - 99 miles	0%	0%	0%	100%	100%
100 - 249 miles	0%	0%	0%	100%	100%
250 - 499 miles	10%	0%	0%	90%	100%
500 - 749 miles	0%	6%	0%	94%	100%
750 - 999 miles	100%	0%	0%	0%	100%
1,000 - 1,499 miles	93%	7%	0%	0%	100%
1,500 - 1,999 miles	0%	100%	0%	0%	100%
2,000 miles or more	0%	0%	0%	100%	100%

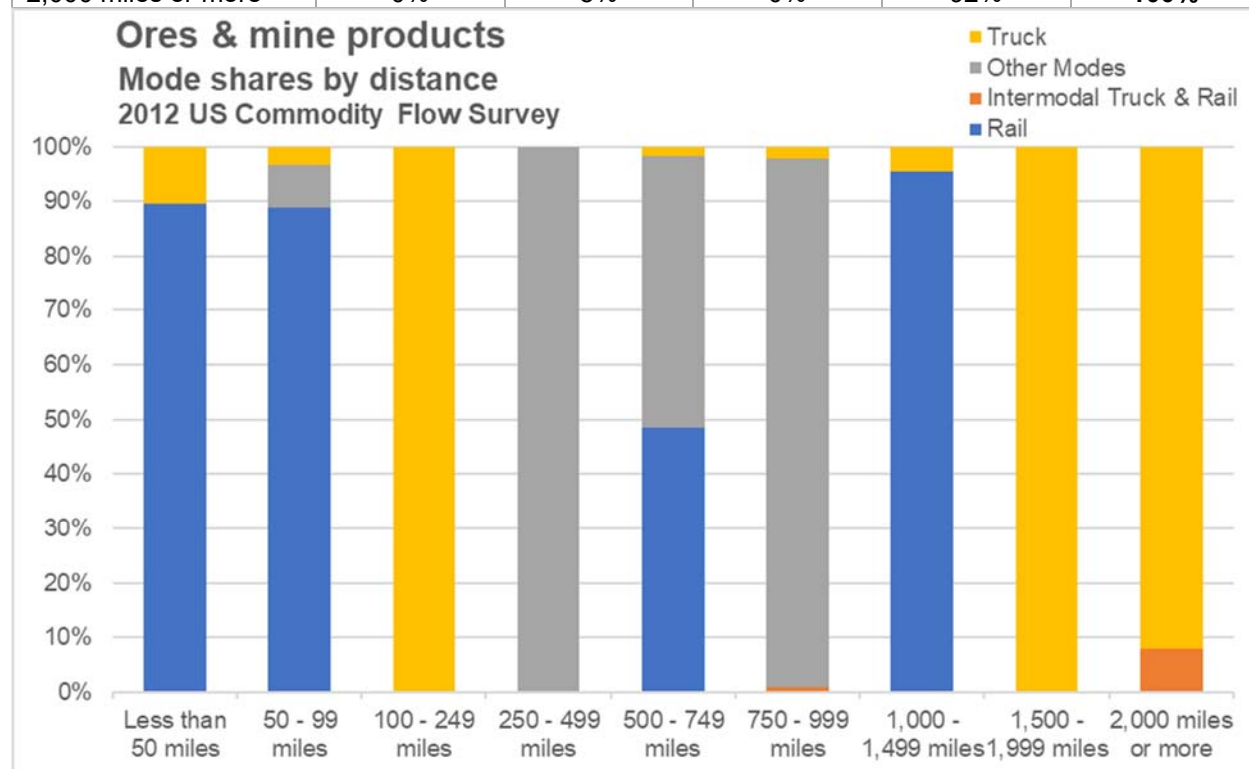


Distance Block	Rail	Intermodal Truck & Rail	Other Modes	Truck	Row % of Total
Less than 50 miles	-	-	-	21,089	61%
50 - 99 miles	17	-	-	7,751	22%
100 - 249 miles	-	-	-	3,322	10%
250 - 499 miles	196	-	-	1,761	6%
500 - 749 miles	-	22	-	318	1%
750 - 999 miles	31	-	-	-	0%
1,000 - 1,499 miles	110	8	-	-	0%
1,500 - 1,999 miles	-	2	-	-	0%
2,000 miles or more	-	-	-	23	0%

Data in table above are in thousands of tons. Source: Commodity Flow Survey

Ores & Mine Products

Distance Band	Rail	Intermodal Truck & Rail	Other Modes	Truck	Row Total
Less than 50 miles	89%	0%	0%	11%	100%
50 - 99 miles	89%	0%	8%	3%	100%
100 - 249 miles	0%	0%	0%	100%	100%
250 - 499 miles	0%	0%	100%	0%	100%
500 - 749 miles	48%	0%	50%	2%	100%
750 - 999 miles	0%	1%	97%	2%	100%
1,000 - 1,499 miles	96%	0%	0%	4%	100%
1,500 - 1,999 miles	0%	0%	0%	100%	100%
2,000 miles or more	0%	8%	0%	92%	100%

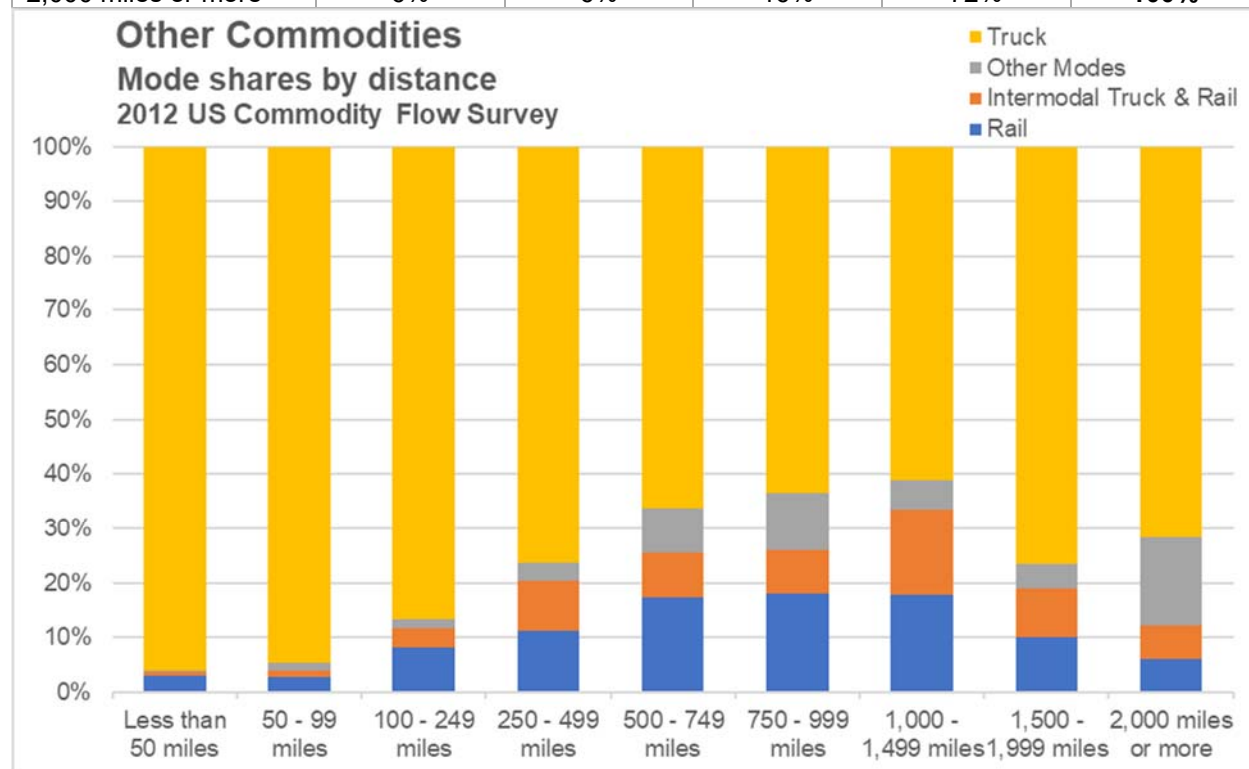


Distance Block	Rail	Intermodal Truck & Rail	Other Modes	Truck	Row % of Total
Less than 50 miles	9,929	-	-	1,166	15%
50 - 99 miles	22,858	6	2,023	848	36%
100 - 249 miles	-	-	-	2,770	4%
250 - 499 miles	-	-	8,359	-	12%
500 - 749 miles	7,923	2	8,165	266	23%
750 - 999 miles	-	34	3,948	88	6%
1,000 - 1,499 miles	3,571	-	-	168	5%
1,500 - 1,999 miles	-	-	-	84	0%
2,000 miles or more	-	4	-	47	0%

Data in table above are in thousands of tons. Source: Commodity Flow Survey

Other Commodities

Distance Band	Rail	Intermodal Truck & Rail	Other Modes	Truck	Row Total
Less than 50 miles	3%	1%	0%	96%	100%
50 - 99 miles	3%	1%	2%	95%	100%
100 - 249 miles	8%	3%	2%	87%	100%
250 - 499 miles	11%	9%	3%	76%	100%
500 - 749 miles	17%	8%	8%	66%	100%
750 - 999 miles	18%	8%	11%	63%	100%
1,000 - 1,499 miles	18%	16%	5%	61%	100%
1,500 - 1,999 miles	10%	9%	4%	77%	100%
2,000 miles or more	6%	6%	16%	72%	100%

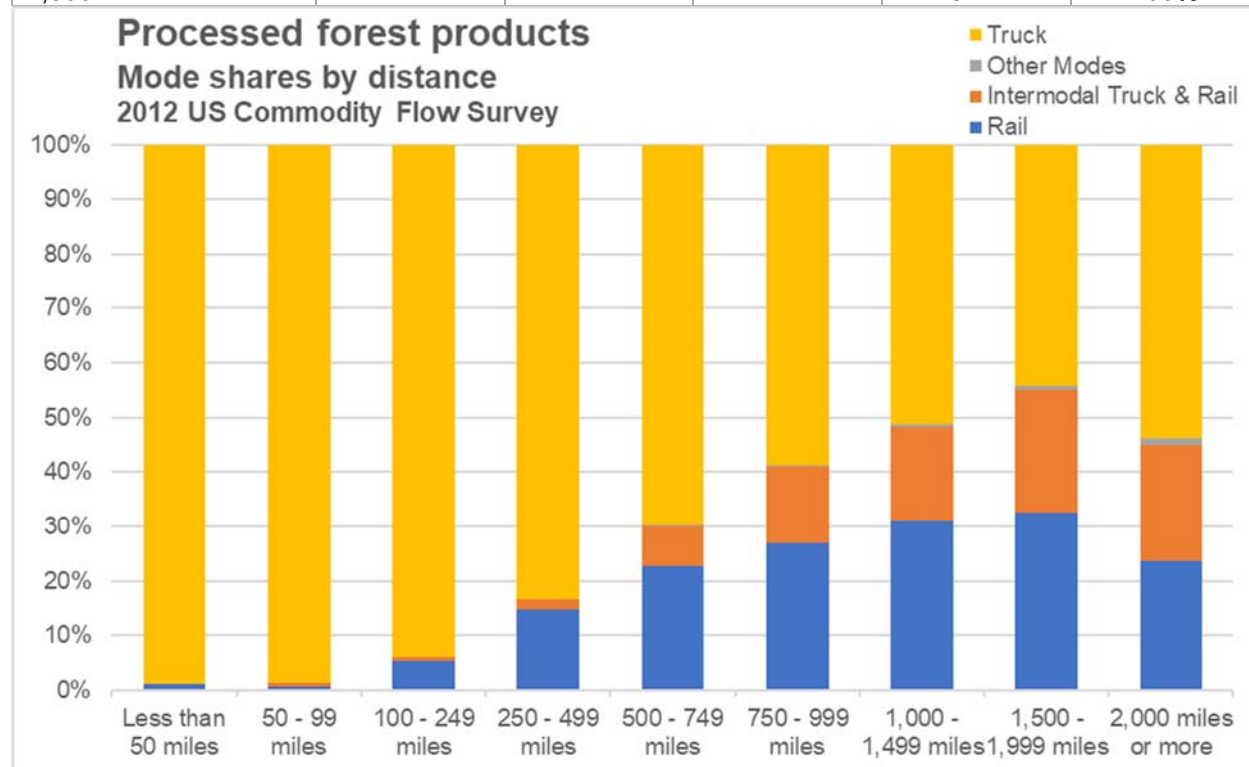


Distance Block	Rail	Intermodal Truck & Rail	Other Modes	Truck	Row % of Total
Less than 50 miles	25,595	6,749	1,043	840,269	57%
50 - 99 miles	5,123	2,176	2,872	177,479	12%
100 - 249 miles	21,012	8,921	4,254	224,014	17%
250 - 499 miles	13,214	10,456	4,039	89,145	8%
500 - 749 miles	6,896	3,259	3,313	26,407	3%
750 - 999 miles	3,796	1,696	2,242	13,451	1%
1,000 - 1,499 miles	2,041	1,779	617	6,972	1%
1,500 - 1,999 miles	851	760	371	6,503	1%
2,000 miles or more	291	290	780	3,440	0%

Data in table above are in thousands of tons. Source: Commodity Flow Survey

Processed Forest Products

Distance Band	Rail	Intermodal Truck & Rail	Other Modes	Truck	Row Total
Less than 50 miles	1%	0%	0%	99%	100%
50 - 99 miles	1%	1%	0%	99%	100%
100 - 249 miles	5%	1%	0%	94%	100%
250 - 499 miles	15%	2%	0%	83%	100%
500 - 749 miles	23%	7%	0%	70%	100%
750 - 999 miles	27%	14%	0%	59%	100%
1,000 - 1,499 miles	31%	17%	1%	51%	100%
1,500 - 1,999 miles	33%	22%	1%	44%	100%
2,000 miles or more	24%	21%	1%	54%	100%

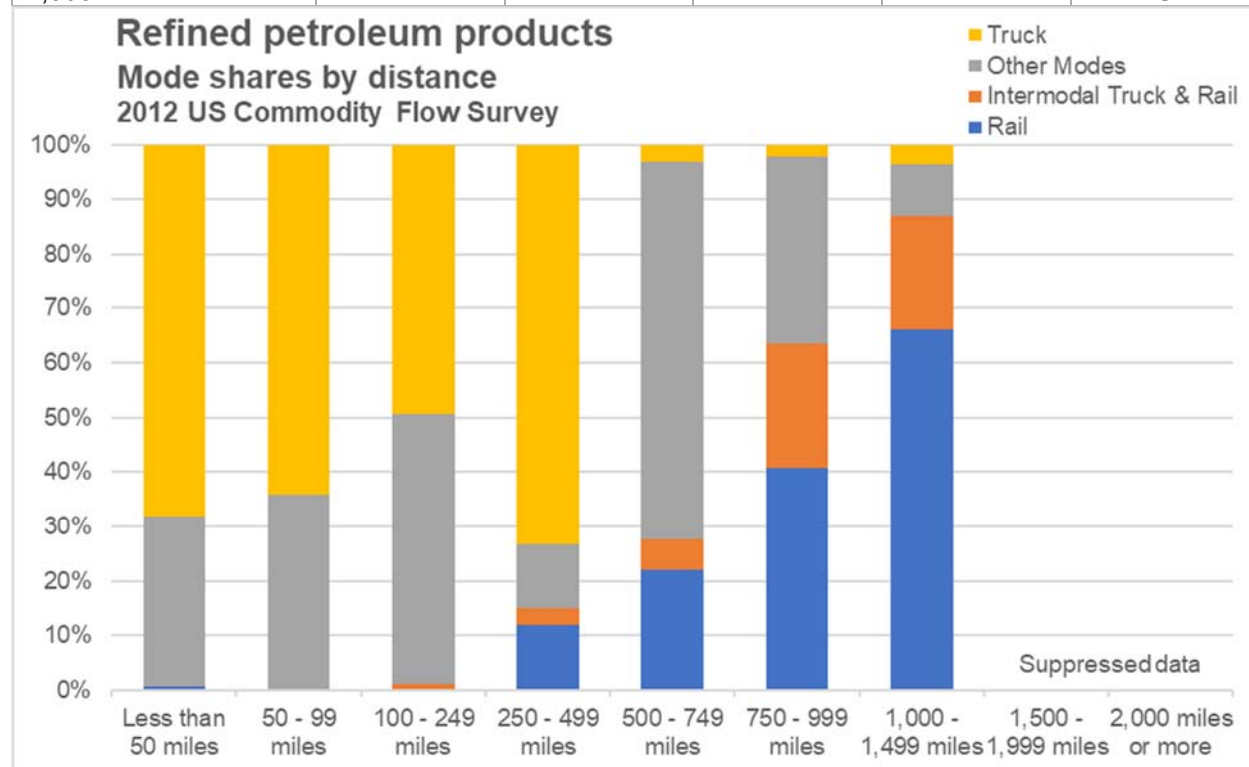


Distance Block	Rail	Intermodal Truck & Rail	Other Modes	Truck	Row % of Total
Less than 50 miles	1,797	-	102	170,493	35%
50 - 99 miles	508	396	43	68,987	14%
100 - 249 miles	5,006	658	102	88,803	19%
250 - 499 miles	9,450	1,220	98	53,629	13%
500 - 749 miles	8,543	2,730	64	26,259	8%
750 - 999 miles	5,810	3,016	71	12,622	4%
1,000 - 1,499 miles	4,313	2,404	89	7,133	3%
1,500 - 1,999 miles	3,228	2,213	73	4,369	2%
2,000 miles or more	1,190	1,079	62	2,722	1%

Data in table above are in thousands of tons. Source: Commodity Flow Survey

Refined Petroleum Products

Distance Band	Rail	Intermodal Truck & Rail	Other Modes	Truck	Row Total
Less than 50 miles	1%	0%	31%	68%	100%
50 - 99 miles	0%	0%	36%	64%	100%
100 - 249 miles	0%	1%	50%	49%	100%
250 - 499 miles	12%	3%	12%	73%	100%
500 - 749 miles	22%	6%	69%	3%	100%
750 - 999 miles	41%	23%	34%	2%	100%
1,000 - 1,499 miles	66%	21%	9%	4%	100%
1,500 - 1,999 miles	S	S	S	S	S
2,000 miles or more	S	S	S	S	S

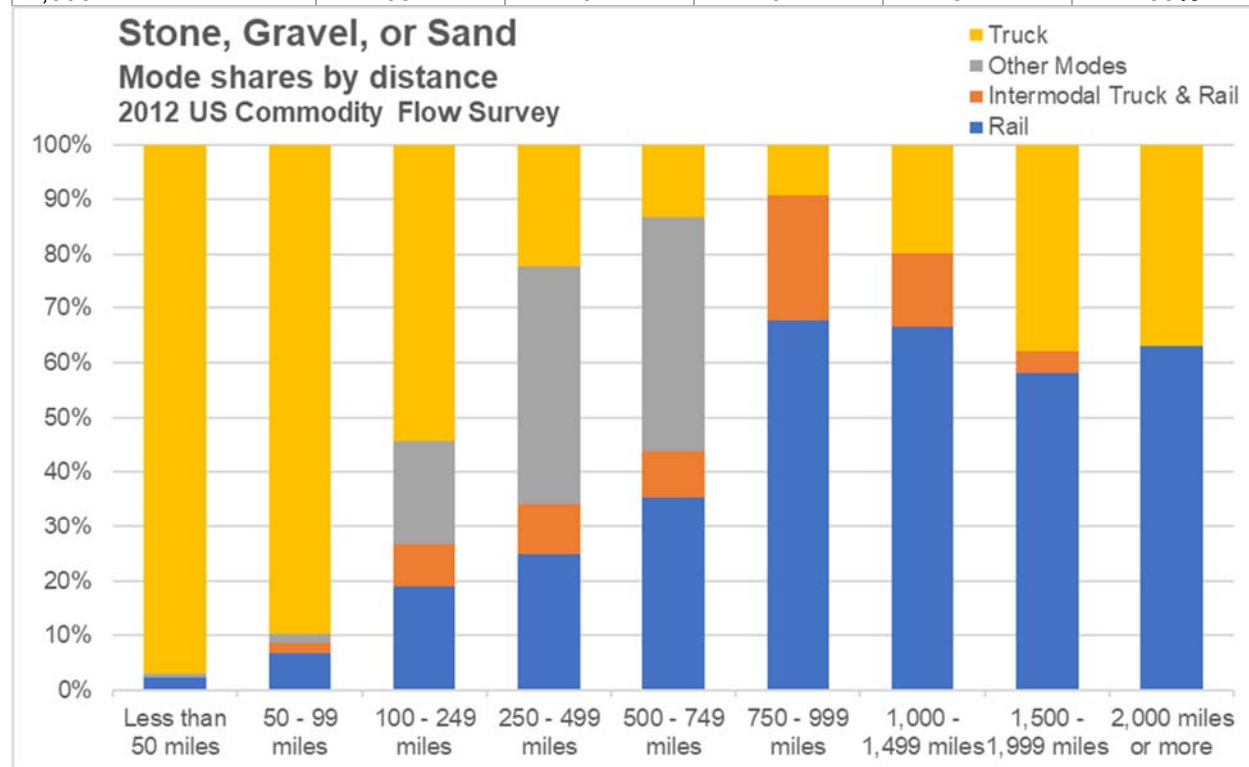


Distance Block	Rail	Intermodal Truck & Rail	Other Modes	Truck	Row % of Total
Less than 50 miles	10,546	-	480,545	1,052,935	80%
50 - 99 miles	60	-	65,144	116,202	9%
100 - 249 miles	280	1,068	63,479	62,932	7%
250 - 499 miles	3,192	817	3,226	19,765	1%
500 - 749 miles	3,809	972	12,011	549	1%
750 - 999 miles	5,812	3,213	4,873	325	1%
1,000 - 1,499 miles	6,464	2,046	903	365	1%
1,500 - 1,999 miles	-	-	-	-	0%
2,000 miles or more	-	-	-	-	0%

Data in table above are in thousands of tons. Source: Commodity Flow Survey

Stone, Gravel, or Sand

Distance Band	Rail	Intermodal Truck & Rail	Other Modes	Truck	Row Total
Less than 50 miles	2%	0%	1%	97%	100%
50 - 99 miles	7%	2%	2%	90%	100%
100 - 249 miles	19%	8%	19%	54%	100%
250 - 499 miles	25%	9%	43%	22%	100%
500 - 749 miles	35%	8%	43%	13%	100%
750 - 999 miles	68%	23%	0%	9%	100%
1,000 - 1,499 miles	67%	14%	0%	20%	100%
1,500 - 1,999 miles	58%	4%	0%	38%	100%
2,000 miles or more	63%	0%	0%	37%	100%



Distance Block	Rail	Intermodal Truck & Rail	Other Modes	Truck	Row % of Total
Less than 50 miles	37,606	1,272	11,652	1,581,092	83%
50 - 99 miles	11,432	3,219	2,968	152,967	9%
100 - 249 miles	17,096	6,766	17,101	48,700	5%
250 - 499 miles	15,052	5,764	26,447	13,575	3%
500 - 749 miles	4,471	1,040	5,427	1,658	1%
750 - 999 miles	3,145	1,072	-	432	0%
1,000 - 1,499 miles	3,071	627	-	920	0%
1,500 - 1,999 miles	140	10	-	91	0%
2,000 miles or more	58	-	-	34	0%

Data in table above are in thousands of tons. Source: Commodity Flow Survey

Appendix 2

Commodity Group Composition

The CFS has its own grouping of shipments into commodity types; *i.e.*, it is not the same as the STCC based commodity definitions in the STB's railroad waybill data. The CFS has 40 commodity codes.⁴ For purposes of this Verified Statement, I used 16 'supercategories', which aggregated the 40 CFS groups into my 16. This was done, in part, because some of the CFS commodity categories have few shipments for some modes in some distance categories and the Bureau of the Census suppressed the data.

⁴ The codes are numbered zero to 43, with some numbers not used.

CFS 2012 Survey List of Commodity Codes and Meanings			
Tretheway Supercategory number	Tretheway Supercategory name	CFS Commodities within Supercategory	CFS Commodity Code
	All Commodities	All Commodities	0
Tretheway 1	Agriculture	Agricultural products (excludes animal feed, cereal grains, and forage products)	3
		Animal feed, eggs, honey, and other products of animal origin	4
Tretheway 2	Animals	Animals and fish (live)	1
Tretheway 3	Autos & parts	Motorized and other vehicles (includes parts)	36
		Transportation equipment, not elsewhere classified	37
Tretheway 4	Chemicals	Basic chemicals	20
		Other chemical products and preparations, not elsewhere classified	23
Tretheway 5	Coal	Other coal and petroleum products, not elsewhere classified	19
Tretheway 6	Ferrous & non-ferrous metals	Base metal in primary or semi-finished forms and in finished basic shapes	32
		Articles of base metal	33
Tretheway 7	Fertilizer materials	Fertilizers	22
Tretheway 8	Grain	Cereal grains (includes seed)	2
		Milled grain products and preparations, and bakery products	6
Tretheway 9	Machinery	Machinery	34
Tretheway 10	Miscellaneous Merchandise Products	Meat, poultry, fish, seafood, and their preparations	5
		Other prepared foodstuffs, and fats and oils (CFS10)	07-R
		Alcoholic beverages and denatured alcohol (CFS20)	08-R
		Tobacco products	9
		Pharmaceutical products	21
		Plastics and rubber	24
		Printed products	29
		Textiles, leather, and articles of textiles or leather	30
		Electronic and other electrical equipment and components, and office equipment	35
		Precision instruments and apparatus	38
		Furniture, mattresses and mattress supports, lamps, lighting fittings, and illuminated signs	39
		Miscellaneous manufactured products	40
Tretheway 11	Non-processed forest products	Logs and other wood in the rough	25
Tretheway 12	Ores & mine products	Metallic ores and concentrates	14
Tretheway 13	Other	Other non-metallic minerals, not elsewhere classified	13
		Non-metallic mineral products	31
		Waste and scrap	41
		Mixed freight	43
Tretheway 14	Processed forest products	Wood products	26
		Pulp, newsprint, paper, and paperboard	27
		Paper or paperboard articles	28
Tretheway 15	Refined petroleum products	Gasoline, aviation turbine fuel, and ethanol (includes kerosene and fuel alcohols) (CFS30)	17-R
		Fuel oils (includes diesel, bunker c, and biodiesel) (CFS40)	18-R
Tretheway 16	Stone, Gravel, or Sand	Monumental or building stone	10
		Natural sands	11
		Gravel and crushed stone (excludes dolomite and slate)	12
Total Supercategories	16	Total CFS commodity groups	16