Data Spotlight

June 7, 2024

U.S. Border Freight Transportation Resiliency

In 2023, the Bureau of Transportation Statistics (BTS) participated in a data-based examination of the U.S.-Canada border with Transport Canada. The primary task of the binational working group was to identify the most consequential land border ports that could be vulnerable to disruption of international freight flows and transportation. The group used freight dollar values and border crossing counts to 1) rank order land ports to identify potential bottlenecks at U.S.-Canada border crossings, and 2) develop a joint framework to measure risks to help promote a more resilient border.

In 2023, the U.S. had $773.9 billion in total freight flows with Canada by all modes of transportation. The largest share (56%) was trucking with total bidirectional freight with Canada at $435.7 billion, and rail in second place (15%) with $113.9 billion.
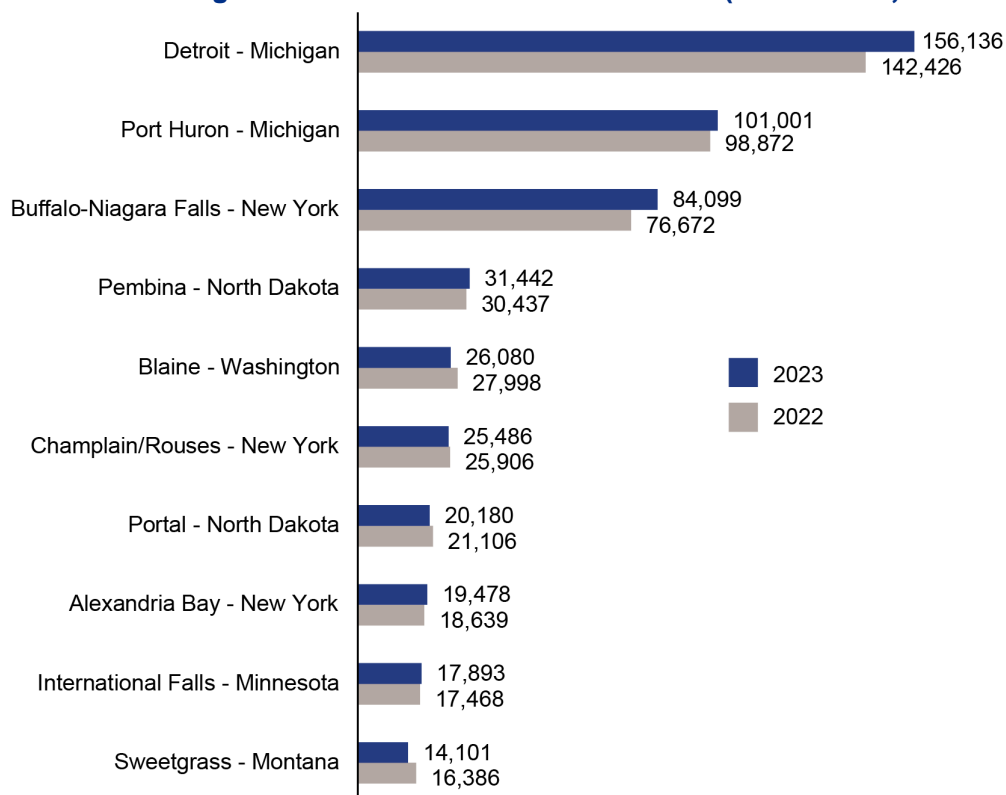
BTS' Office of Transportation Analysis (OTA), utilized in-house resources including the North American TransBorder Freight and Border Crossing database programs to develop objective freight statistics to analyze and rank the ports along the Northern border with Canada.

After further analysis, BTS found that the dollar value of U.S. freight flows with Mexico in 2023 was higher ($798.8 billion) than the dollar value with Canada, so BTS expanded its analysis framework to include the ports along the Southern border at the same capacity. Of the $798.8 billion in total bidirectional freight flows with Mexico by all modes of transportation in 2023, the largest share (70.2%) was trucking at $560.6 billion, and rail in second place (11.9%) at $95.4 billion.

The following figures and tables provide a combined view of BTS' TransBorder and Border Crossing data that was used by the joint border working group to develop the port rankings. Since 2022, the TransBorder data began to reveal an interesting trend showing U.S.-Mexico freight in both dollar value and weight was rising faster than U.S.-Canada.
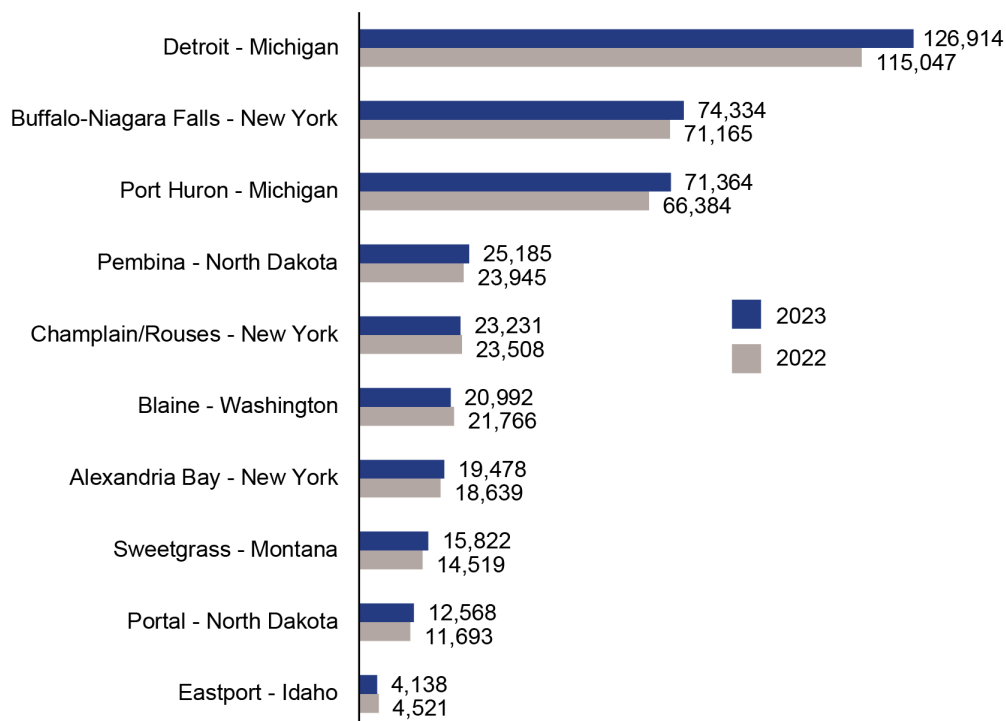
U.S. – CANADA FREIGHT BY TRUCK AND RAIL

Top 10 Land Ports Along the U.S. - Canada Border: 2022–2023 (Truck + Rail, Millions USD)

Port	2023	2022
Detroit - Michigan	156,136	142,426
Port Huron - Michigan	101,001	98,872
Buffalo-Niagara Falls - New York	84,099	76,672
Pembina - North Dakota	31,442	30,437
Blaine - Washington	26,080	27,998
Champlain/Rouses - New York	25,486	25,906
Portal - North Dakota	20,180	21,106
Alexandria Bay - New York	19,478	18,639
International Falls - Minnesota	17,893	17,468
Sweetgrass - Montana	14,101	16,386

Source: Bureau of Transportation Statistics, Transborder Freight Data, available at https://data.bts.gov/stories/s/myhq-rm6q, adapted from U.S. Census Bureau, International Trade in Goods and Services

Top 10 Truck Ports Along the U.S. - Canada Border: 2022–2023 (Millions USD)

Port	2023	2022
Detroit - Michigan	126,914	115,047
Buffalo-Niagara Falls - New York	74,334	71,165
Port Huron - Michigan	71,364	66,384
Pembina - North Dakota	25,185	23,945
Champlain/Rouses - New York	23,231	23,508
Blaine - Washington	20,992	21,766
Alexandria Bay - New York	19,478	18,639
Sweetgrass - Montana	15,822	14,519
Portal - North Dakota	12,568	11,693
Eastport - Idaho	4,138	4,521

Source: Bureau of Transportation Statistics, Transborder Freight Data, available at https://data.bts.gov/stories/s/myhq-rm6q, adapted from U.S. Census Bureau, International Trade in Goods and Services

Top 10 Commodities in U.S. - Canada Freight by Truck: 2023

Commodity	% Export	% Import	% of Total	USD (Millions)	2022–2023
Computer machinery	62.1	37.9	16.70%	72,663	12.10%
Vehicles and parts	51.9	48.1	15.00%	65,185	17.60%
Electrical machinery	73.8	26.2	6.80%	29,579	11.50%
Plastics	53.1	46.9	4.70%	20,663	-7.70%
Pearls, stones and jewelry	44.8	55.2	3.50%	15,070	85.70%
Iron and steel	51.6	48.4	2.50%	10,913	-3.10%
Pharmaceutical products	49.6	50.4	2.40%	10,436	-6.90%
Paper and paperboard	46.5	53.5	2.30%	10,124	-3.40%
Measuring and testing parts	70.1	29.9	2.20%	9,396	8.80%
Cereals and flour	33.4	66.6	2.20%	9,384	9.40%

Source: Bureau of Transportation Statistics, Transborder Freight Data, available at https://data.bts.gov/stories/s/myhq-rm6q, adapted from U.S. Census Bureau, International Trade in Goods and Services

Top 10 Rail Ports Along the U.S. - Canada Border: 2022–2023 (Millions USD)

Rail Port	2023	2022
Port Huron - Michigan	29,637	27,707
Detroit - Michigan	29,222	27,379
International Falls - Minnesota	13,728	17,041
Buffalo-Niagara Falls - New York	9,765	10,288
Portal - North Dakota	7,612	9,414
Pembina - North Dakota	6,258	6,492
Blaine - Washington	5,088	6,232
Eastport - Idaho	3,261	4,737
Champlain-Rouses Point - New York	2,255	2,398
Sweetgrass - Montana	2,071	1,867

Source: Bureau of Transportation Statistics, Transborder Freight Data, available at https://data.bts.gov/stories/s/myhq-rm6q, adapted from U.S. Census Bureau, International Trade in Goods and Services
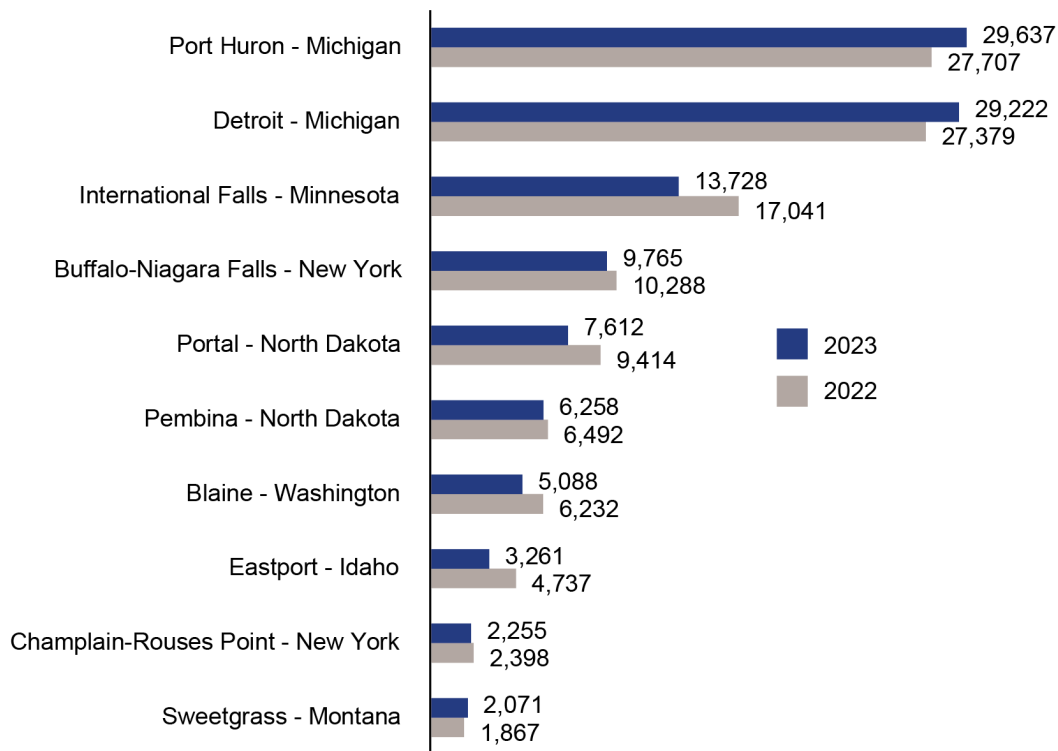
Top 10 Commodities in U.S. - Canada Freight by Rail: 2023

Commodity	% Export	% Import	% of Total	USD (Millions)	2022–2023
Vehicles and parts	46.1	53.9	39.80%	45,345	19.30%
Mineral fuels	24.8	75.2	8.20%	9,341	-23.60%
Plastics	44.3	55.7	5.90%	6,684	-23.00%
Wood	5.5	94.5	5.00%	5,671	-41.40%
Fertilizers	29.7	70.3	4.90%	5,528	-25.40%
Animal or vegetable fats	6.8	93.2	4.60%	5,221	16.40%
Aluminum	1.0	99.0	4.10%	4,617	-8.30%
Organic chemicals	40.4	59.6	3.70%	4,234	-5.60%
Iron and steel	23.8	76.2	3.30%	3,808	-13.10%
Miscellaneous chemicals	61.8	38.2	2.30%	2,626	8.20%

Source: Bureau of Transportation Statistics, Transborder Freight Data, available at https://data.bts.gov/stories/s/myhq-rm6q, adapted from U.S. Census Bureau, International Trade in Goods and Services

Risk Assessment Ranking: Top U.S. - Canada Freight Crossings: 2023

| Port Name	Exports % of Total	Imports % of Total	% of Total Freight Flows	Total USD ($M 000,000)	Two-Way Truck Crossings	Distance to nearest road crossing (Miles)	Nearest crossing name	
Detroit, Michigan	54.3	45.7	28.4	156,136	3,125,062	65	Port Huron, Michigan	
Port Huron, Michigan	48.8	51.2	18.4	101,001	1,564,520	65	Detroit, Michigan	
Buffalo, New York	53.6	46.4	15.3	84,099	1,785,676	36	Niagara, New York	
Pembina, North Dakota	51.2	48.8	5.7	31,442	489,008	20	Neche, North Dakota	
Peace Arch Blaine, Washington	51.9	48.1	4.7	26,080	712,042	2	Pacific Hwy Blaine, Washington	
Champlain, New York	39.8	60.2	4.6	25,486	527,378	20	Overton Corners, New York	
Portal, North Dakota	58.2	41.8	3.7	20,180	180,066	23	Northgate, North Dakota	
Alexandria Bay, New York	44.8	55.2	3.5	19,478	372,922	48	Ogdensburg, New York	
Sweetgrass, Montana	46.1	53.9	3.3	17,893	300,840	72	Del Bonita, Montana	
Int'l Falls, Minnesota	31.8	68.2	2.6	14,101	33,596	68	Baudette, Minnesota	

U.S. – MEXICO FREIGHT BY TRUCK AND RAIL

Top 10 Land Ports Along the U.S. - Mexico Border: 2022–2023 (Truck + Rail, Millions USD)

Port	2023	2022
Laredo - Texas	310,332	287,251
El Paso/Ysleta - Texas	91,093	92,892
Otay Mesa - California	59,288	58,571
Hidalgo - Texas	41,953	40,476
Eagle Pass - Texas	37,031	33,914
Santa Teresa - New Mexico	31,258	30,905
Nogales - Arizona	26,775	28,306
Calexico-East - California	21,714	20,210
Brownsville - Texas	19,880	19,062
Del Rio - Texas	5,694	5,448

Source: Bureau of Transportation Statistics, Transborder Freight Data, available at https://data.bts.gov/stories/s/myhq-rm6q, adapted from U.S. Census Bureau, International Trade in Goods and Services

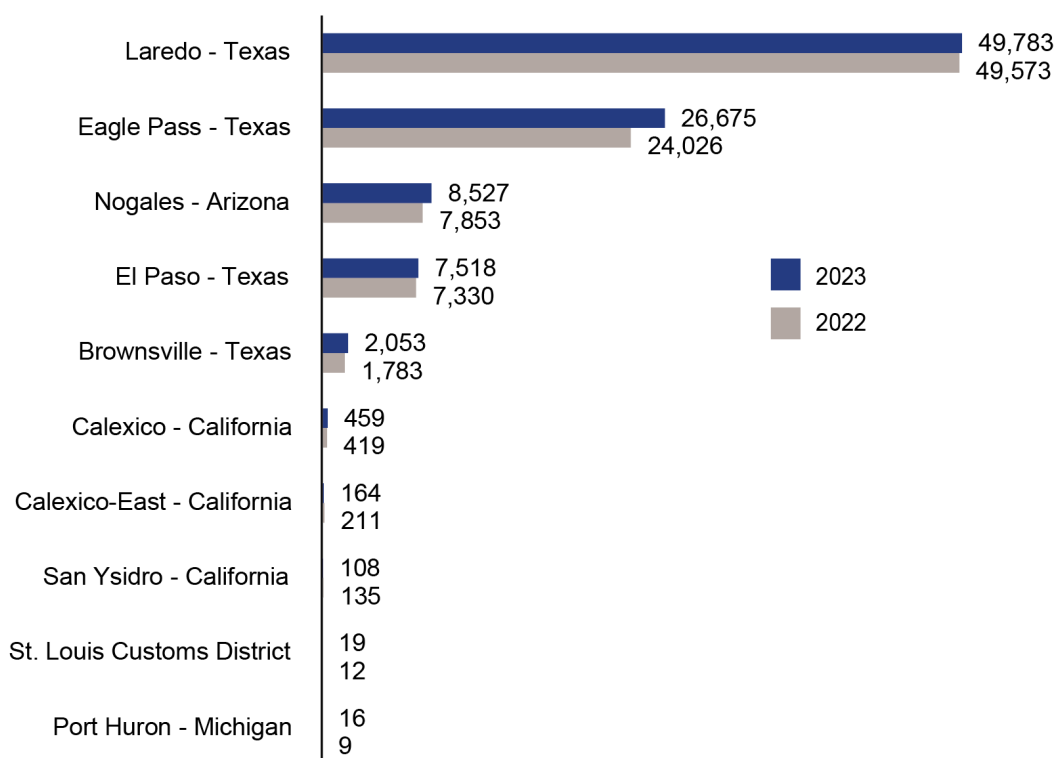**Top 10 Truck Ports Along the U.S. - Mexico Border: 2022–2023 (Millions USD)**

Port	2023	2022
Laredo - Texas	260,549	237,677
El Paso/Ysleta - Texas	83,574	85,561
Otay Mesa - California	59,288	58,571
Hidalgo - Texas	41,953	40,476
Santa Teresa - New Mexico	26,775	30,905
Nogales - Arizona	22,730	20,453
Calexico-East - California	21,550	19,999
Brownsville - Texas	17,827	17,279
Eagle Pass - Texas	10,356	9,888
Del Rio - Texas	5,694	5,448

Source: Bureau of Transportation Statistics, Transborder Freight Data, available at https://data.bts.gov/stories/s/myhq-rm6q, adapted from U.S. Census Bureau, International Trade in Goods and Services
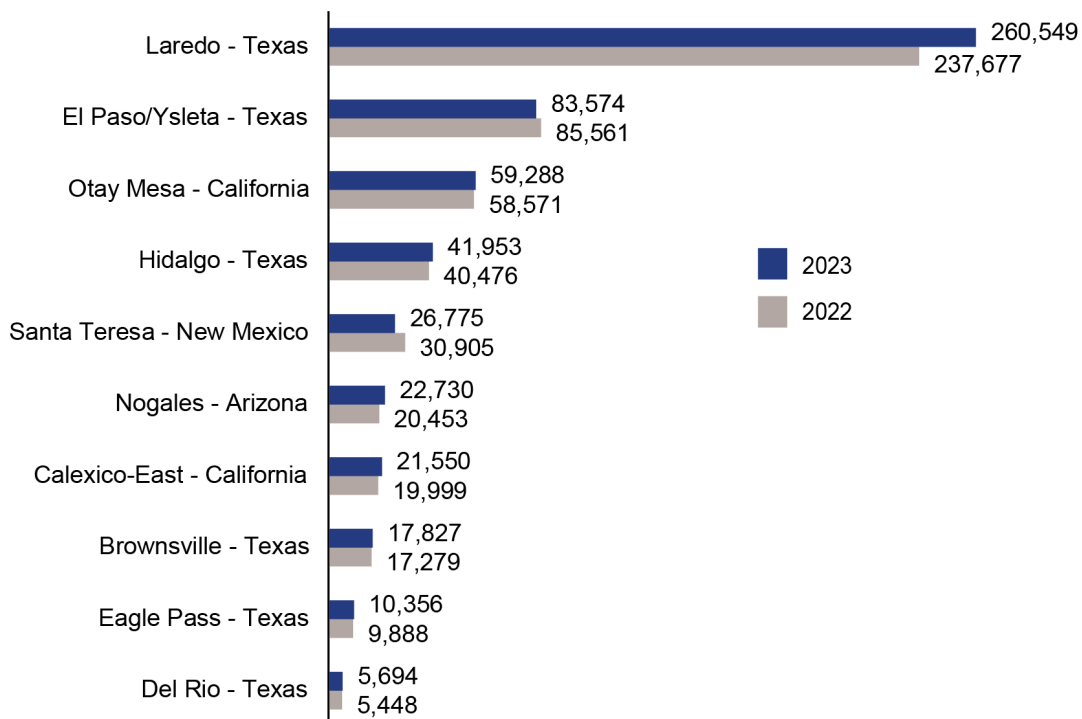
Top 10 Commodities in U.S. - Mexico Freight by Truck: 2023

Commodity	% Export	% Import	% of Total	USD (Millions)	2022–2023
Electrical machinery	36.8	63.2	22.50%	125,999	6.20%
Computers	34.9	65.1	19.90%	111,501	-5.40%
Vehicles and parts	25.1	74.9	14.80%	83,250	19.00%
Measuring instruments	30.4	69.6	5.30%	29,970	17.80%
Plastics	72.5	27.5	4.40%	24,766	1.40%
Furniture	12.3	87.7	2.60%	14,788	2.00%
Iron and steel	52.5	47.5	2.40%	13,711	2.30%
Fruit and nuts	9.7	90.3	2.10%	11,545	3.80%
Vegetables and roots	4.7	95.3	1.70%	9,636	7.40%
Rubber	54.0	46.0	1.40%	7,650	10.30%
Mineral fuels	98.7	1.3	1.30%	7,280	15.00%

Source: Bureau of Transportation Statistics, Transborder Freight Data, available at https://data.bts.gov/stories/s/myhq-rm6q, adapted from U.S. Census Bureau, International Trade in Goods and Services

Top 10 Rail Ports Along the U.S. - Mexico Border: 2022–2023 (Millions USD)

Rail Port	2023	2022
Laredo - Texas	49,783	49,573
Eagle Pass - Texas	26,675	24,026
Nogales - Arizona	8,527	7,853
El Paso - Texas	7,518	7,330
Brownsville - Texas	2,053	1,783
Calexico - California	459	419
Calexico-East - California	164	211
San Ysidro - California	108	135
St. Louis Customs District	19	12
Port Huron - Michigan	16	9

Source: Bureau of Transportation Statistics, Transborder Freight Data, available at https://data.bts.gov/stories/s/myhq-rm6q, adapted from U.S. Census Bureau, International Trade in Goods and Services
Note: Rail shipments from Mexico to St. Louis and Port Huron indicate CBP customs clearing districts.

Top 10 Commodities in U.S. - Mexico Freight by Rail: 2023

Commodity	% Export	% Import	% of Total	USD (Millions)	2022–2023
Vehicles and parts	10.2	89.8	51.20%	48,779	14.50%
Computer machinery	31.7	68.3	8.40%	8,002	5.20%
Beverages and pirits	2.6	97.4	5.40%	5,131	9.00%
Mineral fuels	93.4	6.6	5.20%	4,913	3.70%
Cereals	99.9	0.1	4.70%	4,441	-0.90%
Plastics	80.3	19.7	3.90%	3,712	-24.10%
Iron and steel	63.0	37.0	3.40%	3,247	-22.20%
Oil Seeds and fruits	99.9	0.1	2.10%	2,042	-16.30%
Electrical machinery	31.4	68.6	1.70%	1,593	17.50%
Food residues	98.9	1.1	1.60%	1,541	-6.10%
Inorganic chemicals	68.8	31.2	1.20%	1,161	-10.70%

Source: Bureau of Transportation Statistics, Transborder Freight Data, available at https://data.bts.gov/stories/s/myhq-rm6q, adapted from U.S. Census Bureau, International Trade in Goods and Services

Risk Assessment Ranking: Top U.S. - Mexico Freight Crossings: 2023

Port Name	Exports % of Total	Imports % of Total	% of Total Freight Flows	Total USD ($M 000,000)	Two-Way Truck Crossings	to nearest road crossing (Miles)	Nearest crossing name	
Laredo - Texas	39.1	60.9	47.3	310,332	5,872,260	20	Colombia-Solidarity, Texas	
El Paso/Ysleta - Texas	35.1	64.9	11.2	91,093	1,460,878	22	Santa Teresa, New Mexico	
Otay Mesa - California	36.2	63.8	9.0	59,288	2,068,376	27	Tecate, California	
Hidalgo - Texas	34.4	65.6	6.4	41,953	1,417,452	11	Pharr, Texas	
Eagle Pass - Texas	31.1	68.9	5.6	37,031	421,418	55	Del Rio, Texas	
Nogales - Arizona	32.5	67.5	4.8	31,258	763,938	95	Naco, Arizona	
Santa Teresa - New Mexico	36.9	63.1	4.1	26,775	357,508	22	El Paso - Texas	
Calexico-East - California	38.6	61.4	3.3	21,714	916,318	20	Calexico West-Sentri, California	
Brownsville - Texas	54.3	45.7	3.0	19,880	650,448	33	Los Indios, Texas	
Del Rio - Texas	39	61	0.9	5,694	156,992	55	Eagle Pass, Texas	

Note: Colors indicate risk levels: red is high, yellow is moderate, and green is low. Two-way truck crossing counts are estimates based on doubling of one-way counts.
Sources: Bureau of Transportation Statistics, Transborder Freight Data, available at https://data.bts.gov/stories/s/myhq-rm6q, adapted from U.S. Census Bureau, International Trade in Goods and Services, Bureau of Transportation Statistics, Border Crossing/Entry Data, available at https://data.bts.gov/stories/s/jswi-2e7b