

2022 Delaware State Freight Plan

FAF 5 Forecasting



FEBRUARY 11, 2022

IIJA Key Freight Provisions

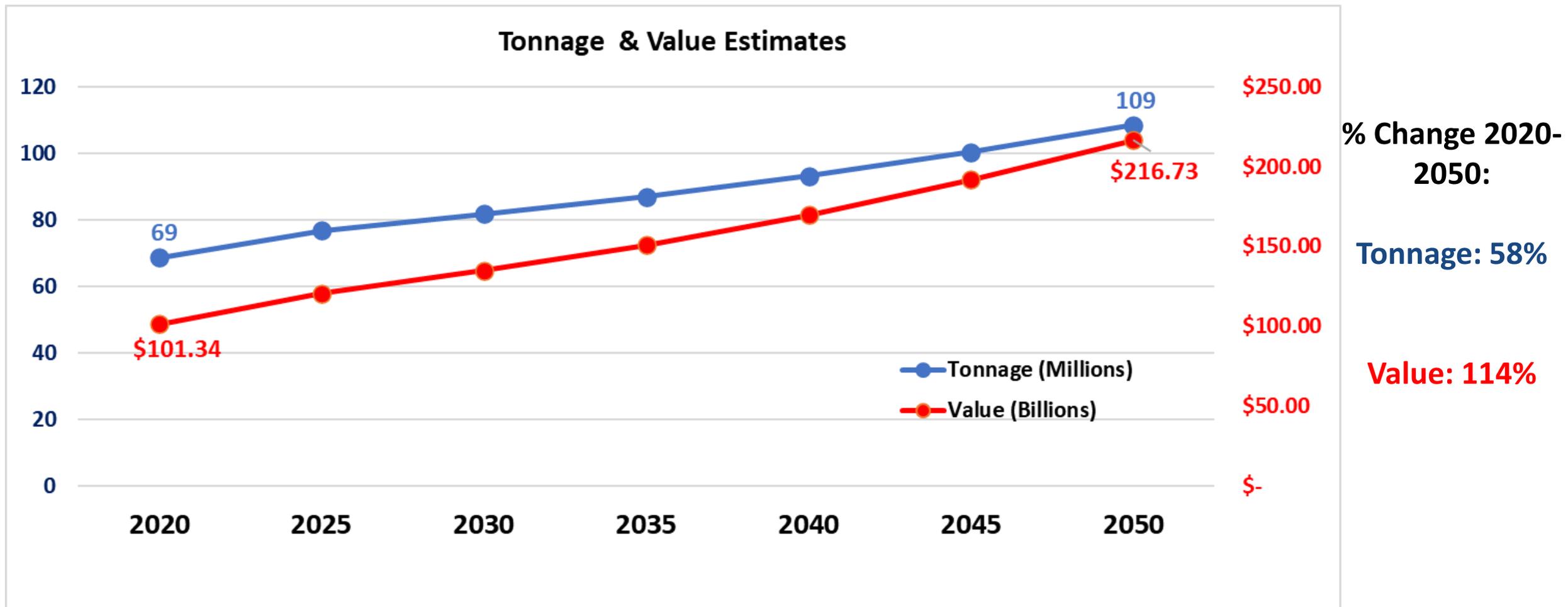
- Domestic Modes are the modes used between domestic origins and destinations, modes used between zones of entry and domestic destination for imports, and modes used between domestic origins and zones of exit for exports.
- Foreign Modes comprise the mode of arrival to zones of entry within the U.S. for imports or mode of departure from zones of exit within the U.S. for exports
- All data shown is for DOMESTIC movements once International good reach DE (or leave DE to an International destination)

Import into DE		
Import Origin	Tons (Thousands) 2020	%
801-Canada	81.2	1%
802-Mexico	955.7	12%
803-Rest of Americas	3,355.50	41%
804-Europe	1,027.80	12%
805-Africa	693.8	8%
806-SW & Central Asia	2,106.60	26%
807-Eastern Asia	2.3	0%
808-SE Asia & Oceania	5.9	0%
	8228.8	

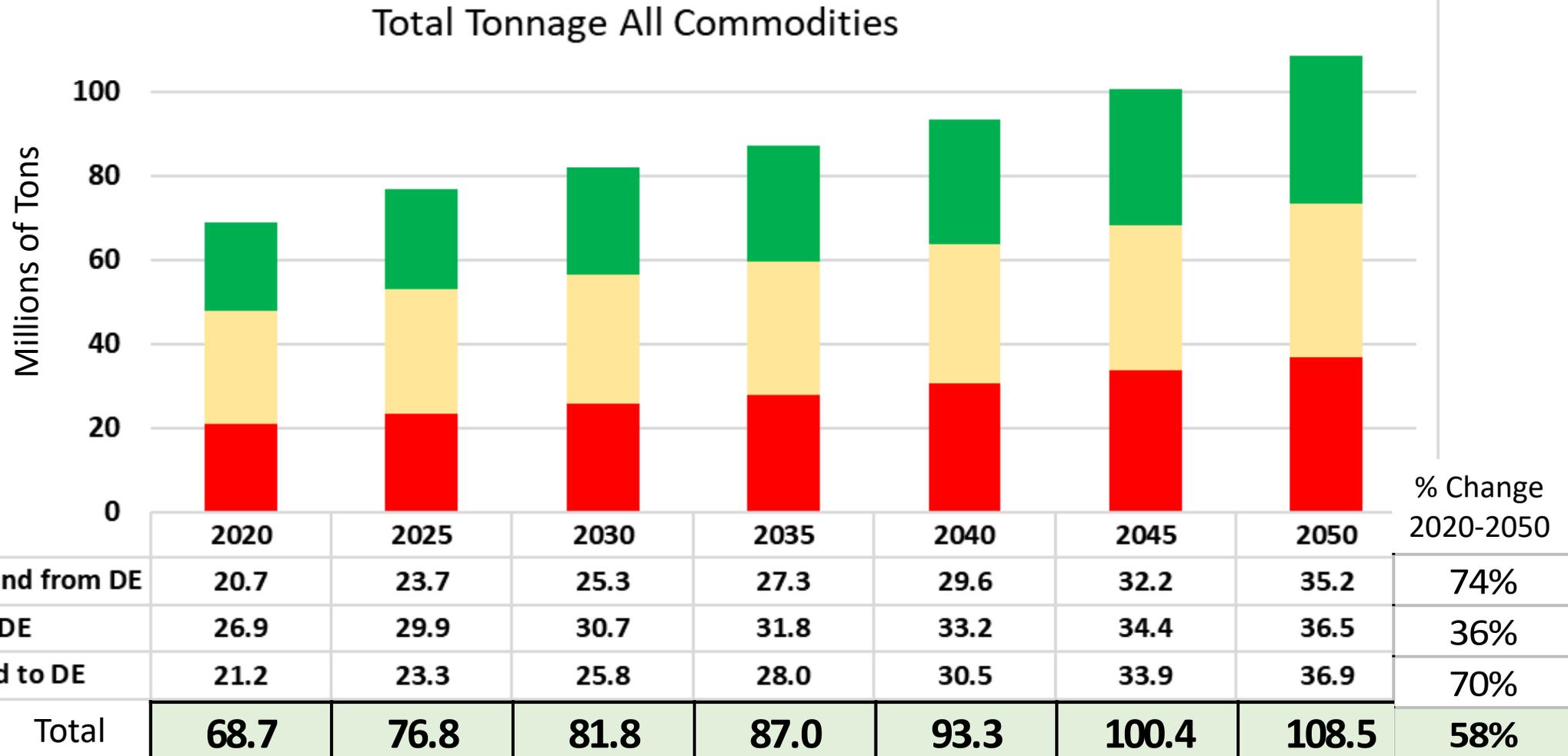
Exports From DE		
Export Destination	Tons (Thousands) 2020	%
801-Canada	22.6	3%
802-Mexico	0	0%
803-Rest of Americas	380.6	46%
804-Europe	177.1	21%
805-Africa	14.7	2%
806-SW & Central Asia	162.9	20%
807-Eastern Asia	55.2	7%
808-SE Asia & Oceania	12	1%
	825.1	

Total Forecast - Delaware

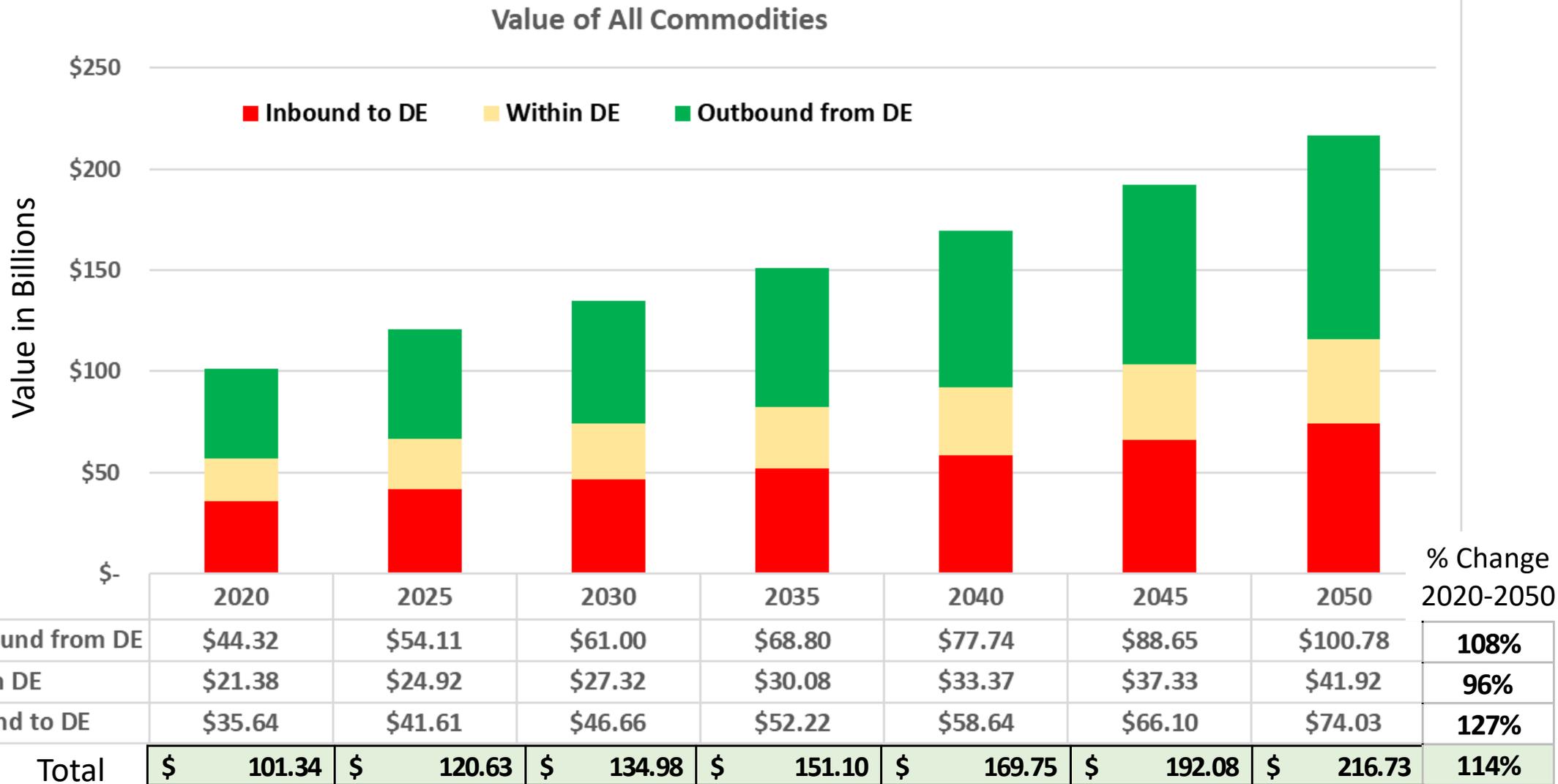
- Includes all movements (INBOUND,OUTBOUND, Within DE)



Total Tonnage Forecast - Delaware



Total Value Forecast - Delaware



Modal Trends

Total Tonnage by Modal % (Inbound/Outbound/Within DE)

Mode	2020	2050
Truck	68.4%	71.6%
Pipeline	16.7%	11.8%
Rail	9.5%	11.9%
Multiple modes & mail	3.6%	4.8%
Water	2.2%	1.4%
Air (include truck-air)	0.1%	0.2%

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.

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.

Modal Trends

Total Tons (in Millions) by Mode

Truck			
Tonnage (All Types)	2020	2050	Change
Inbound to DE	14.4	25.4	77%
Within DE	19.8	29.7	50%
Outbound from DE	12.8	22.6	76%
TOTAL	47.0	77.7	65%

Rail			
Tonnage (All Types)	2020	2050	Change
Tons IMPORT to DE	3.5	6.3	82%
Tons WITHIN DE	0.4	0.6	62%
Tons EXPORT from DE	2.7	6.0	127%
TOTAL	6.5	13.0	99%

Water			
Tonnage (All Types)	2020	2050	Change
Tons IMPORT to DE	0.40	0.41	1%
Tons WITHIN DE	0.00	0.00	19%
Tons EXPORT from DE	1.13	1.07	-5%
TOTAL	1.53	1.48	-3%

Air (include truck-air)			
Tonnage (All Types)	2020	2050	Change
Tons IMPORT to DE	0.08	0.17	103%
Tons WITHIN DE	0.00	0.00	N/A
Tons EXPORT from DE	0.00	0.01	123%
TOTAL	0.09	0.18	104%

Multiple modes & mail			
Tonnage (All Types)	2020	2050	Change
Tons IMPORT to DE	1.3	2.3	71%
Tons WITHIN DE	0.1	0.2	174%
Tons EXPORT from DE	1.0	2.7	160%
TOTAL	2.5	5.2	112%

Pipeline			
Tonnage (All Types)	2020	2050	Change
Tons IMPORT to DE	1.5	2.3	54%
Tons WITHIN DE	3.4	4.3	26%
Tons EXPORT from DE	3.0	2.7	-12%
TOTAL	7.9	9.2	17%

Commodity Trends – What's in the box?

Top Commodities by Tonnage

2020 Top 12		% of All Movements
1	Other ag prods.	10%
2	Crude petroleum	10%
3	Coal-n.e.c.	7%
4	Gasoline	7%
5	Gravel	6%
6	Mixed freight	5%
7	Nonmetal min. prods.	5%
8	Other foodstuffs	5%
9	Animal feed	5%
10	Cereal grains	5%
11	Fuel oils	5%
12	Basic chemicals	4%

75% of all Movements

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9	Animal feed	5%
10	Cereal grains	5%
11	Fuel oils	5%
12	Basic chemicals	4%

2050 Top 12		% of All Movements
1	Other ag prods.	9%
2	Basic chemicals	8%
3	Coal-n.e.c.	7%
4	Mixed freight	7%
5	Crude petroleum	7%
6	Gravel	6%
7	Animal feed	6%
8	Other foodstuffs	5%
9	Nonmetal min. prods.	5%
10	Gasoline	4%
11	Cereal grains	4%
12	Plastics/rubber	3%

Increase in Share

Decline in Share

75% of all Movements

71% of all Movements

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Commodity Trends – What's in the box?

Big-Movers by % Tonnage Change

Commodity	2020	2050	2020-50 Change	2020-50 % Change
37-Transport equip.	19	93	75	399%
14-Metallic ores	65	321	256	396%
20-Basic chemicals	3,010	9,205	6,195	206%
01-Live animals/fish	862	2,593	1,731	201%
21-Pharmaceuticals	251	712	461	183%
22-Fertilizers	588	1,554	966	164%
40-Misc. mfg. prods.	397	1,006	609	153%
24-Plastics/rubber	1,305	3,282	1,977	152%
23-Chemical prods.	517	1,277	760	147%
30-Textiles/leather	556	1,250	694	125%
38-Precision instruments	58	124	66	114%
36-Motorized vehicles	410	842	431	105%

Commodity Trends – What's in the box?

Top Commodities by Value

	2020 Top 12	% of Total Value 2020
1	Pharmaceuticals	18%
2	Mixed freight	9%
3	Plastics/rubber	7%
4	Electronics	7%
5	Basic chemicals	6%
6	Other ag prods.	5%
7	Motorized vehicles	4%
8	Textiles/leather	3%
9	Machinery	3%
10	Other foodstuffs	3%
11	Meat/seafood	3%
12	Misc. mfg. prods.	3%

74% of all Movements

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11	Meat/seafood	3%
12	Misc. mfg. prods.	3%

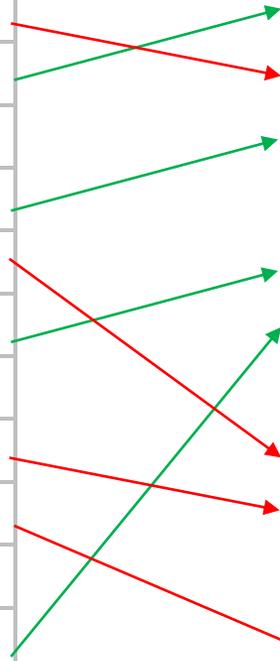
74% of all Movements

	2050 Top 12	% of Total Value 2050
1	Pharmaceuticals	25%
2	Plastics/rubber	9%
3	Mixed freight	8%
4	Basic chemicals	8%
5	Electronics	7%
6	Motorized vehicles	4%
7	Misc. mfg. prods.	4%
8	Textiles/leather	3%
9	Other ag prods.	3%
10	Machinery	3%
11	Precision instruments	3%
12	Other foodstuffs	3%

79% of all Movements

Increase in Share

Decline in Share



Commodity Trends – What’s in the box?

Pharmaceuticals – Deep Dive

Top INBOUND locations

dms_orig	dms_dest	dms_mode	thousand tons in 2020	thousand tons in 2050
27-Minnesota	10-Delaware	1-Truck	58.90	183.36
24-Maryland	10-Delaware	1-Truck	22.28	71.05
42-Pennsylvania	10-Delaware	1-Truck	14.03	40.92
26-Michigan	10-Delaware	1-Truck	10.71	34.00
09-Connecticut	10-Delaware	1-Truck	5.00	15.89
51-Virginia	10-Delaware	2-Rail	4.47	8.65
42-Pennsylvania	10-Delaware	5-Multiple modes & mail	2.66	8.47
34-New Jersey	10-Delaware	1-Truck	2.31	7.13
37-North Carolina	10-Delaware	1-Truck	2.00	3.46
45-South Carolina	10-Delaware	2-Rail	1.31	2.42
34-New Jersey	10-Delaware	2-Rail	1.18	2.72
24-Maryland	10-Delaware	5-Multiple modes & mail	1.12	3.47
36-New York	10-Delaware	1-Truck	1.01	3.12
27-Minnesota	10-Delaware	4-Air (include truck-air)	0.57	1.79

Top OUTBOUND locations

dms_orig	dms_dest	dms_mode	thousand tons in 2020	thousand tons in 2050
10-Delaware	42-Pennsylvania	1-Truck	8.17	18.91
10-Delaware	24-Maryland	1-Truck	8.15	19.20
10-Delaware	36-New York	1-Truck	5.36	10.70
10-Delaware	13-Georgia	5-Multiple modes & mail	4.64	9.92
10-Delaware	42-Pennsylvania	5-Multiple modes & mail	4.39	13.94
10-Delaware	18-Indiana	1-Truck	4.13	13.28
10-Delaware	24-Maryland	5-Multiple modes & mail	4.02	12.70
10-Delaware	18-Indiana	5-Multiple modes & mail	2.08	6.68
10-Delaware	51-Virginia	2-Rail	1.12	1.94
10-Delaware	51-Virginia	5-Multiple modes & mail	1.07	3.05
10-Delaware	04-Arizona	5-Multiple modes & mail	1.05	3.27
10-Delaware	39-Ohio	1-Truck	1.04	3.31
10-Delaware	29-Missouri	5-Multiple modes & mail	1.04	3.28
10-Delaware	06-California	5-Multiple modes & mail	1.01	3.15

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26-Michigan	10-Delaware	1-Truck	10.71	34.00
09-Connecticut	10-Delaware	1-Truck	5.00	15.89
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42-Pennsylvania	10-Delaware	5-Multiple modes & mail	2.66	8.47
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24-Maryland	10-Delaware	5-Multiple modes & mail	1.12	3.47
36-New York	10-Delaware	1-Truck	1.01	3.12
27-Minnesota	10-Delaware	4-Air (include truck-air)	0.57	1.79

Inbound Mode Split

Mode	2020	2050
Truck	89%	88%
Rail	5.7%	5.7%
Water	0.0%	0.7%
Air (include truck-air)	0.4%	0.4%
Multiple modes & mail	4.7%	4.7%
Pipeline	0.0%	0.0%
Other and unknown	0.0%	0.0%
No domestic mode	0.0%	0.0%

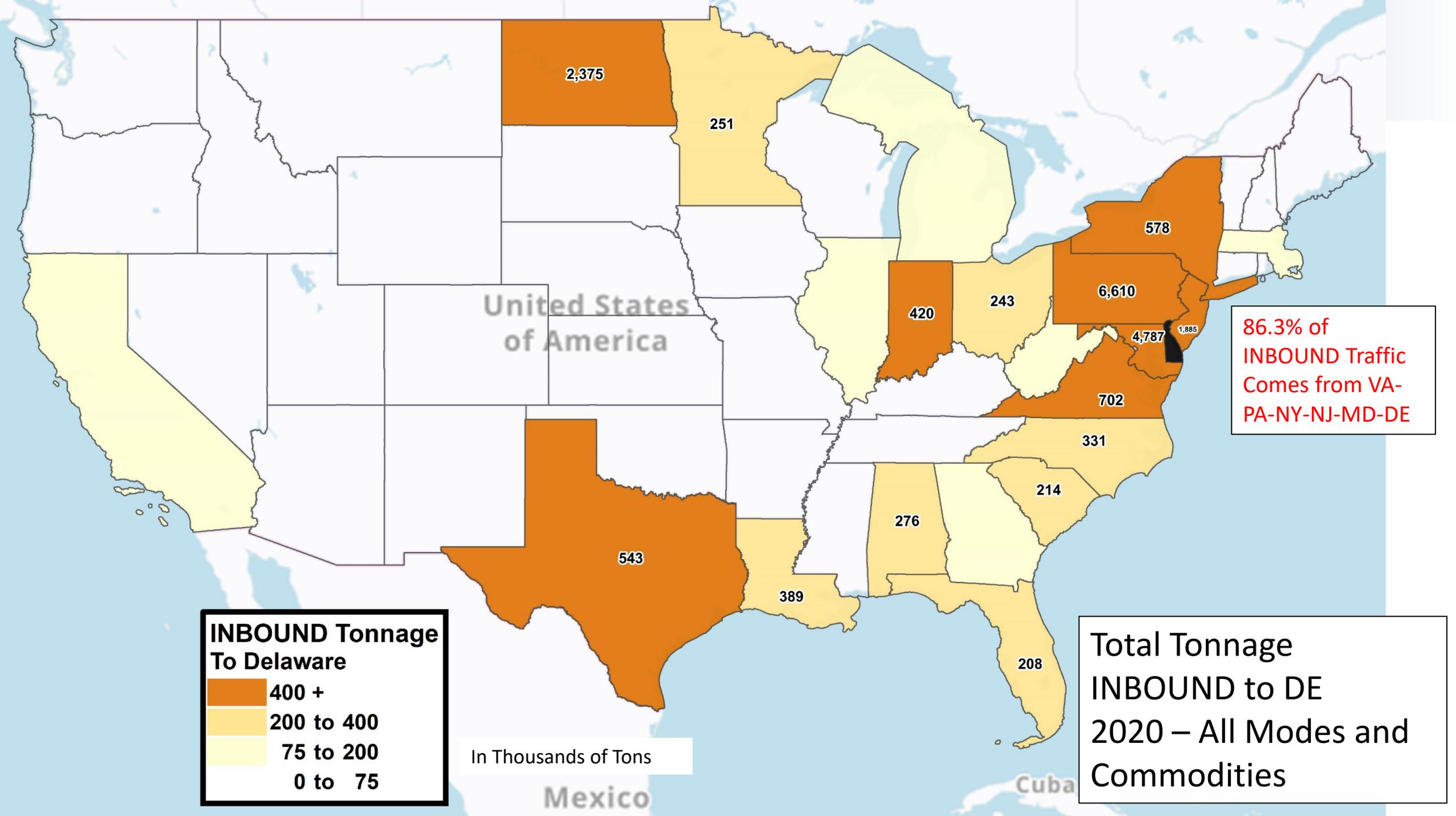
Top OUTBOUND locations

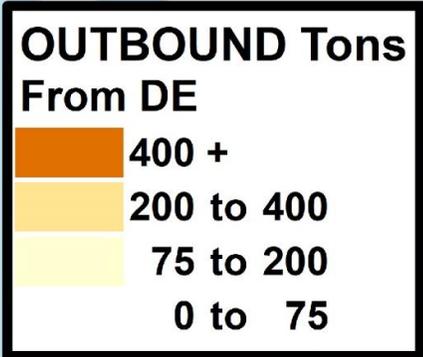
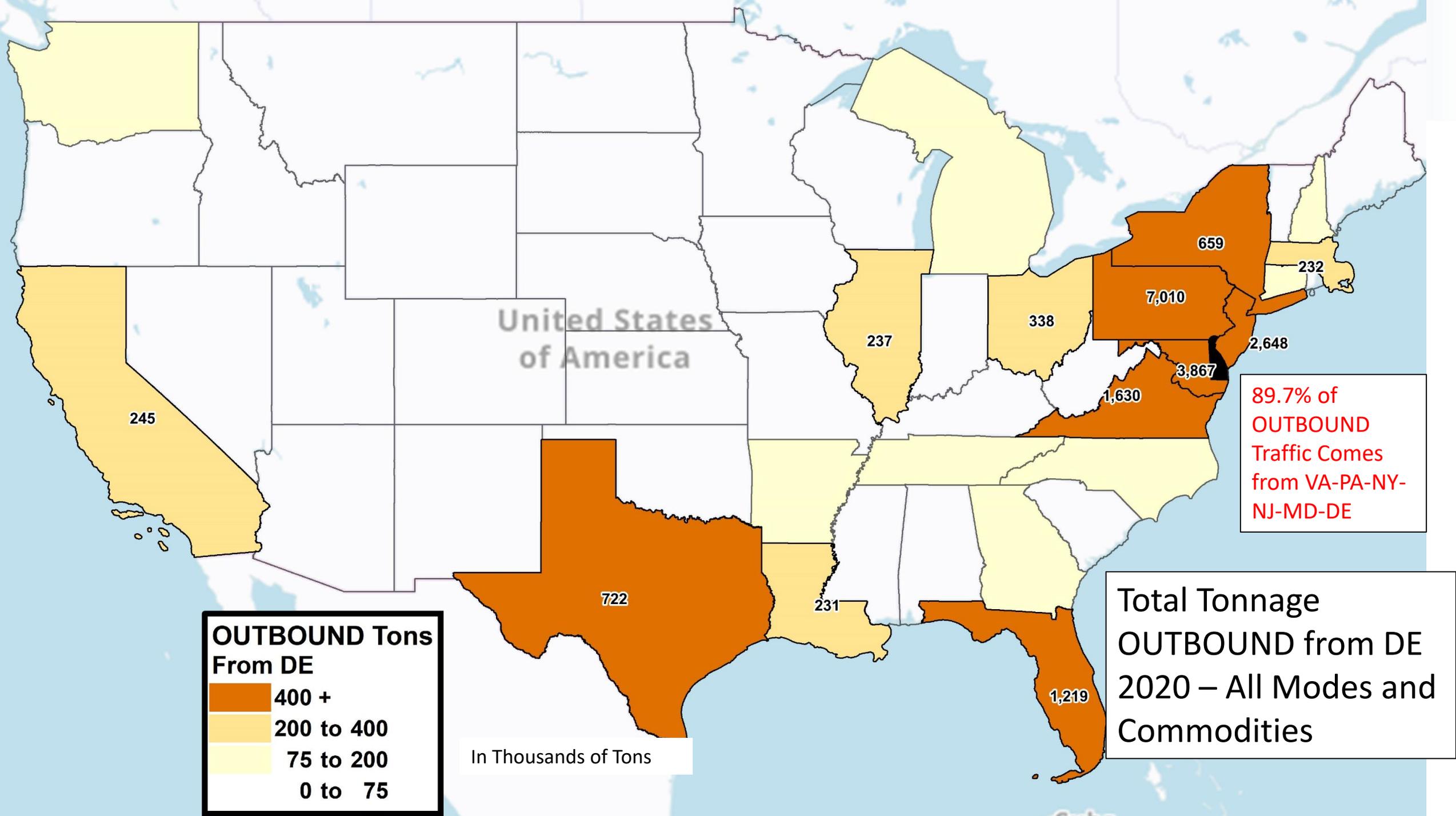
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10-Delaware	51-Virginia	5-Multiple modes & mail	1.07	3.05
10-Delaware	04-Arizona	5-Multiple modes & mail	1.05	3.27
10-Delaware	39-Ohio	1-Truck	1.04	3.31
10-Delaware	29-Missouri	5-Multiple modes & mail	1.04	3.28
10-Delaware	06-California	5-Multiple modes & mail	1.01	3.15

Outbound Mode Split

Mode	2020	2050
Truck	54.2%	55.7%
Rail	2.6%	2.6%
Water	0.0%	0.0%
Air (include truck-air)	0.1%	0.1%
Multiple modes & mail	43.1%	41.6%
Pipeline	0.0%	0.0%
Other and unknown	0.0%	0.0%
No domestic mode	0.0%	0.0%

Origins and Destinations – Where does it go?

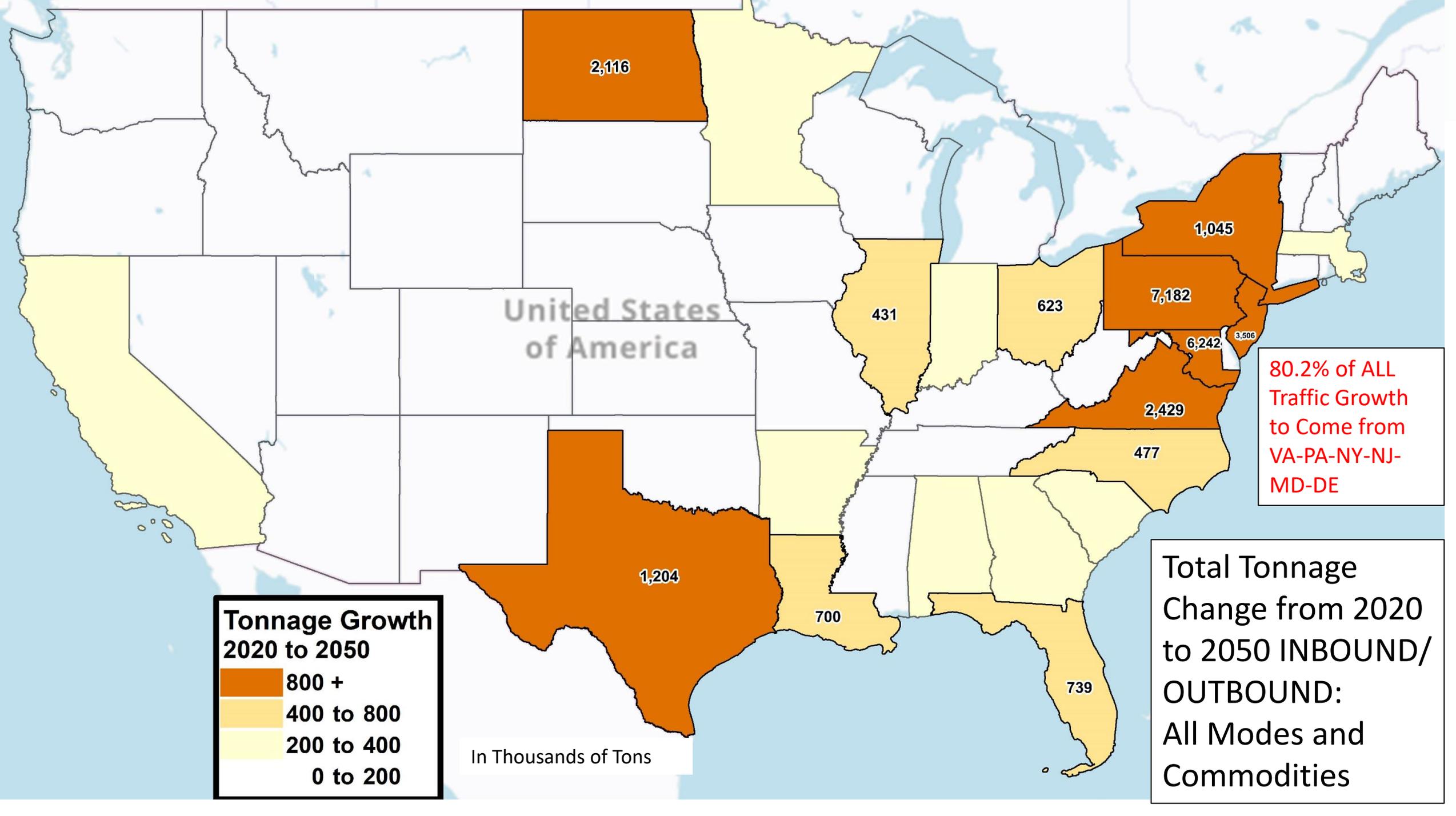




In Thousands of Tons

89.7% of
OUTBOUND
Traffic Comes
from VA-PA-NY-
NJ-MD-DE

Total Tonnage
OUTBOUND from DE
2020 – All Modes and
Commodities

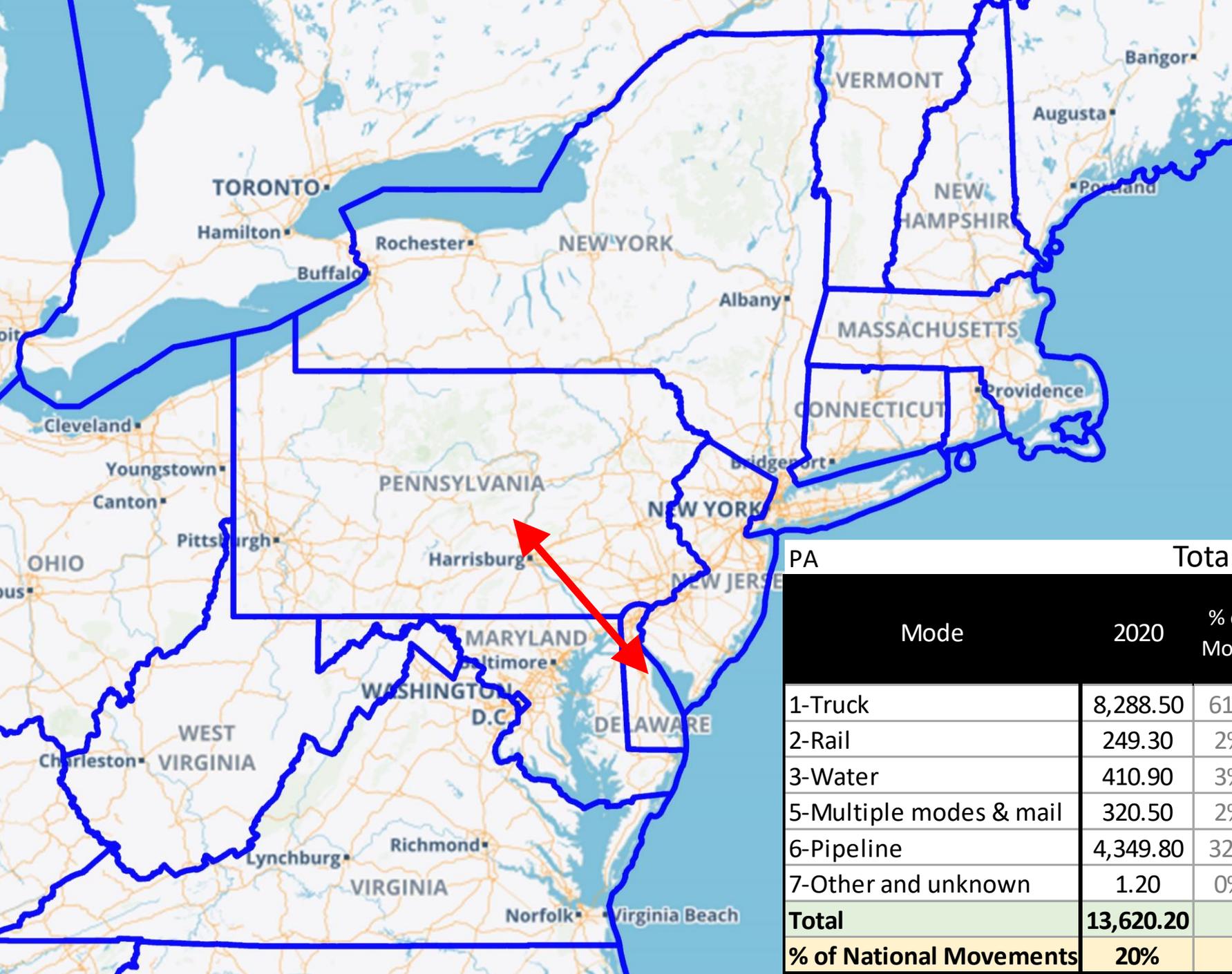


**Tonnage Growth
2020 to 2050**

- 800 +
- 400 to 800
- 200 to 400
- 0 to 200

80.2% of ALL Traffic Growth to Come from VA-PA-NY-NJ-MD-DE

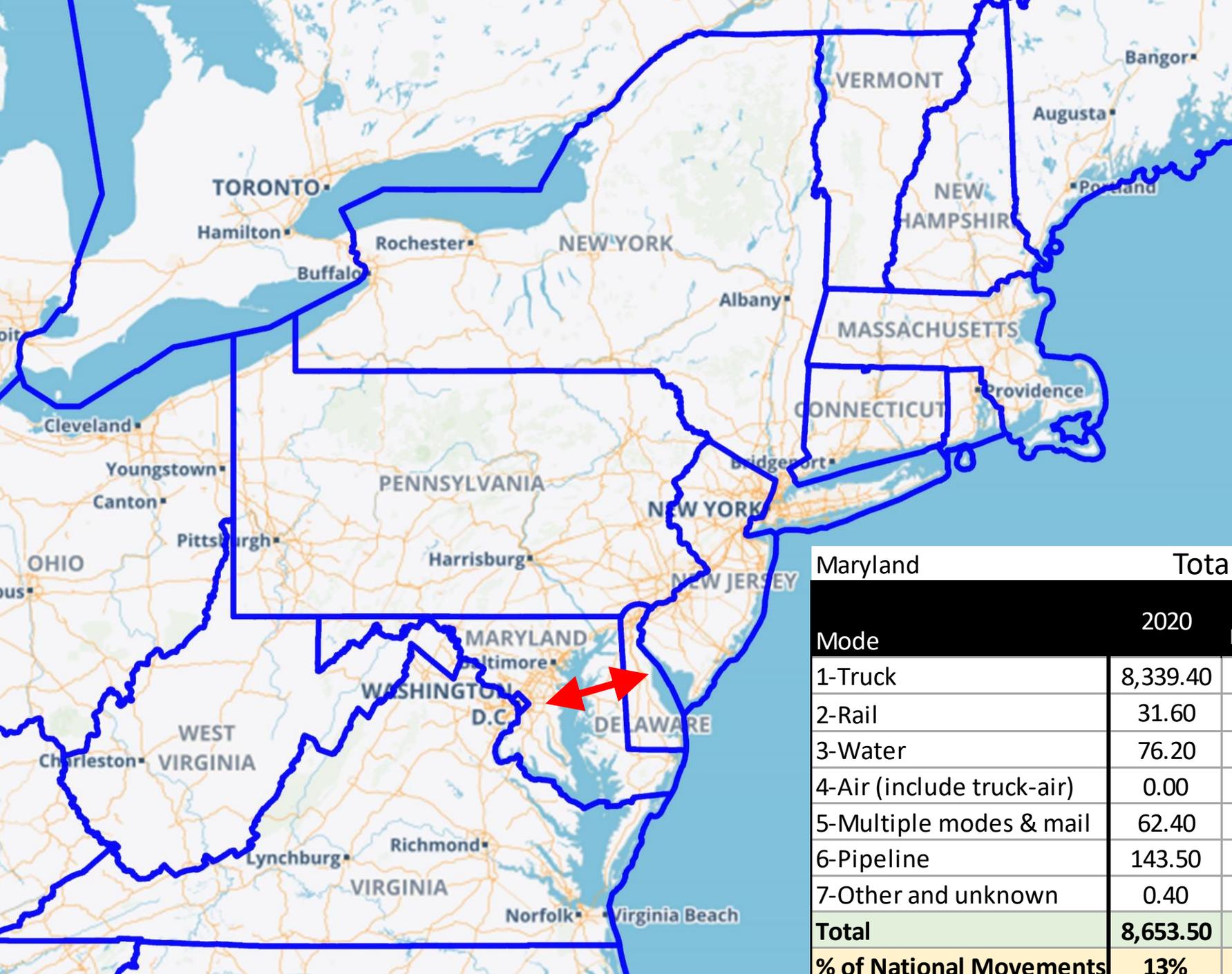
Total Tonnage Change from 2020 to 2050 INBOUND/OUTBOUND:
All Modes and Commodities



Combined Inbound/Outbound Movements with DE

With Pennsylvania

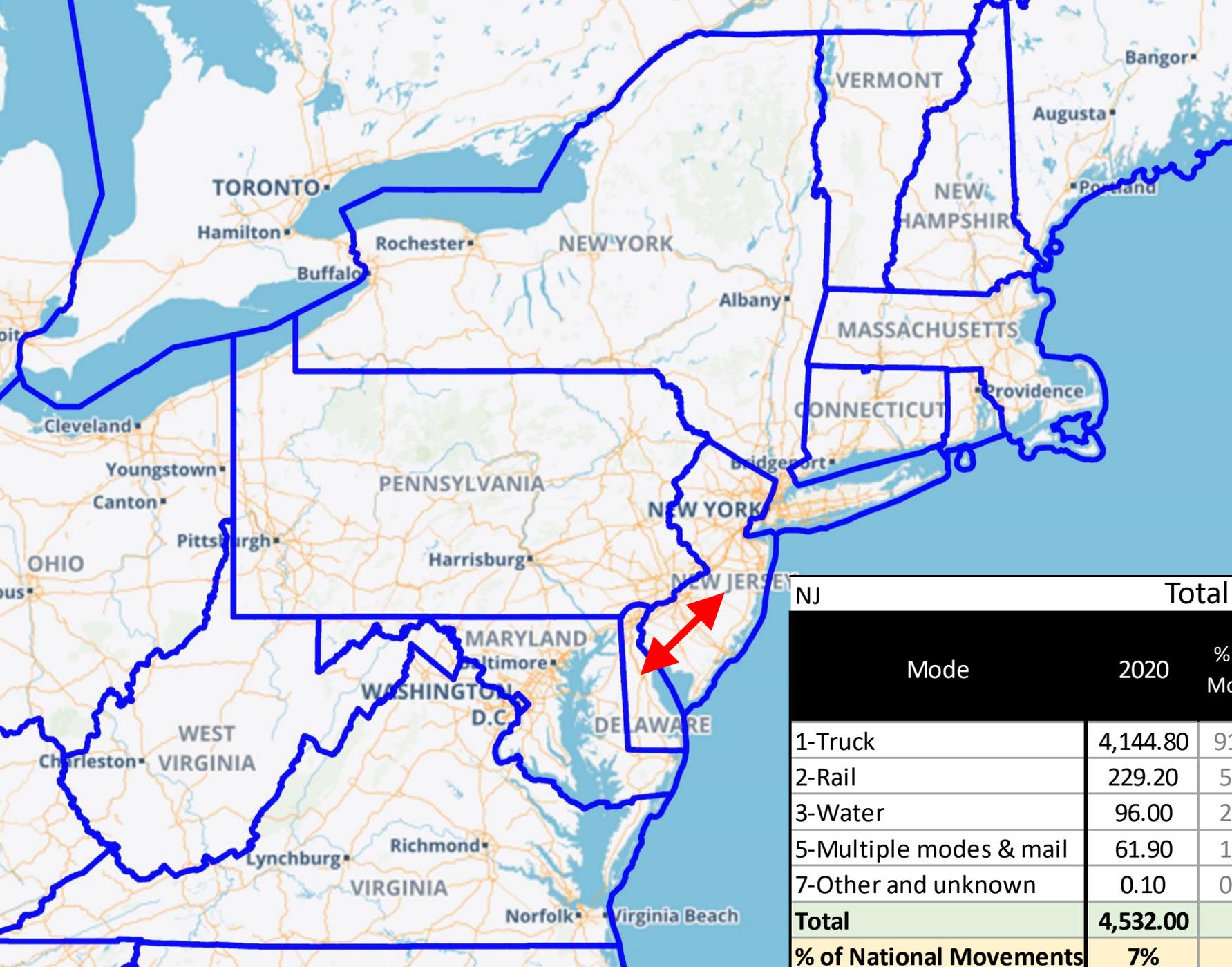
Mode	Total Tonnage					
	2020	% of Mode	2050	% of Mode	2020 - 2050 Change	2020 - 2050 % Change
1-Truck	8,288.50	61%	14,159.60	68%	5,871.10	71%
2-Rail	249.30	2%	595.00	3%	345.70	139%
3-Water	410.90	3%	361.50	2%	-49.40	-12%
5-Multiple modes & mail	320.50	2%	923.10	4%	602.60	188%
6-Pipeline	4,349.80	32%	4,760.00	23%	410.20	9%
7-Other and unknown	1.20	0%	3.10	0%	1.90	158%
Total	13,620.20		20,802.30		7,182.10	53%
% of National Movements	20%		19%			



Combined Inbound/Outbound Movements with DE

With Maryland

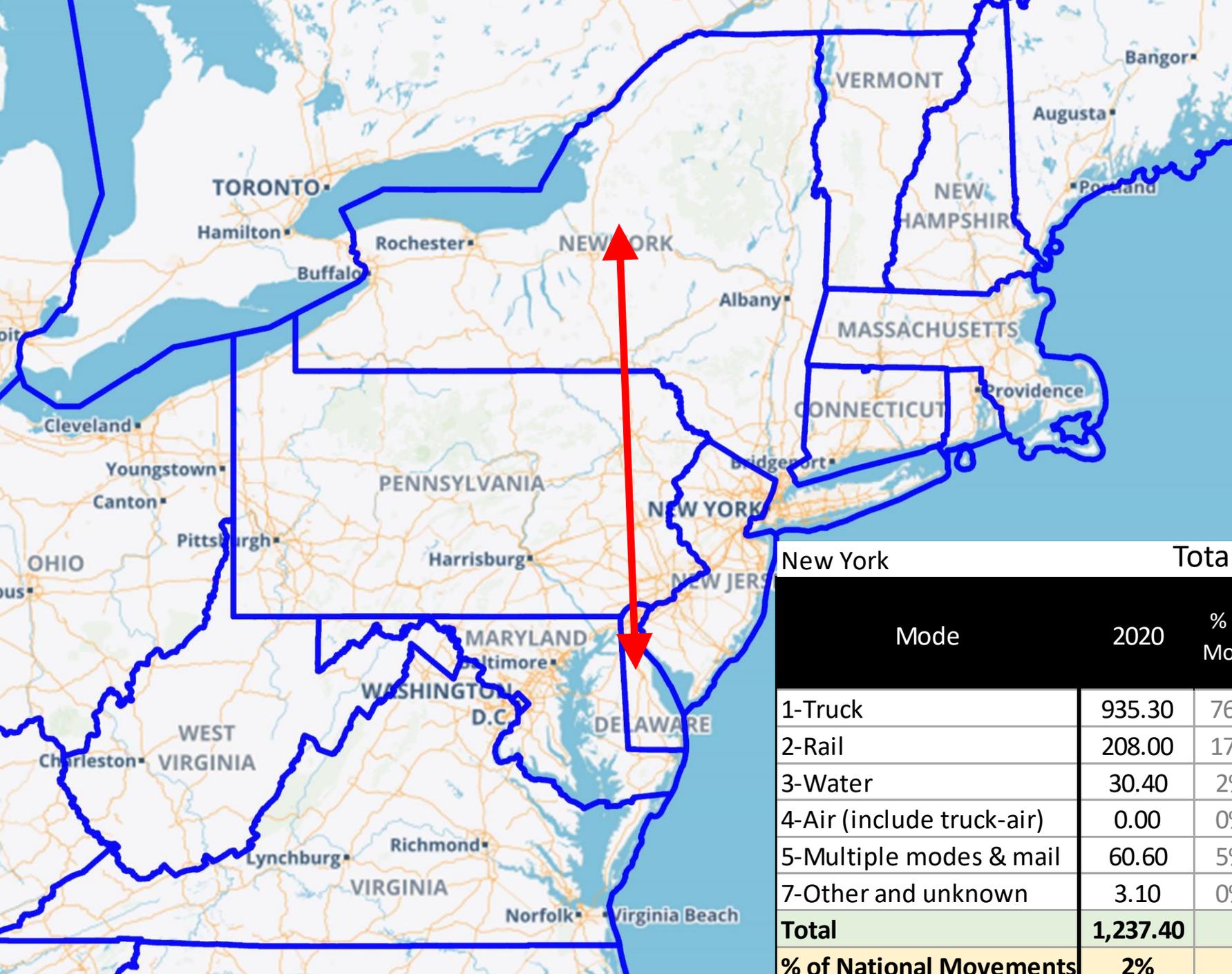
Mode	Total Tonnage					
	Maryland 2020	% of Mode	2050	% of Mode	2020 - 2050 Change	2020 - 2050 % Change
1-Truck	8,339.40	96%	14,480.90	97%	6,141.50	74%
2-Rail	31.60	0%	55.10	0%	23.50	74%
3-Water	76.20	1%	51.30	0%	-24.90	-33%
4-Air (include truck-air)	0.00	0%	0.00	0%	0.00	0%
5-Multiple modes & mail	62.40	1%	127.00	1%	64.60	104%
6-Pipeline	143.50	2%	180.30	1%	36.80	26%
7-Other and unknown	0.40	0%	1.00	0%	0.60	150%
Total	8,653.50		14,895.60		6,242.10	72%
% of National Movements	13%		14%			



Combined Inbound/Outbound Movements with DE

With New Jersey

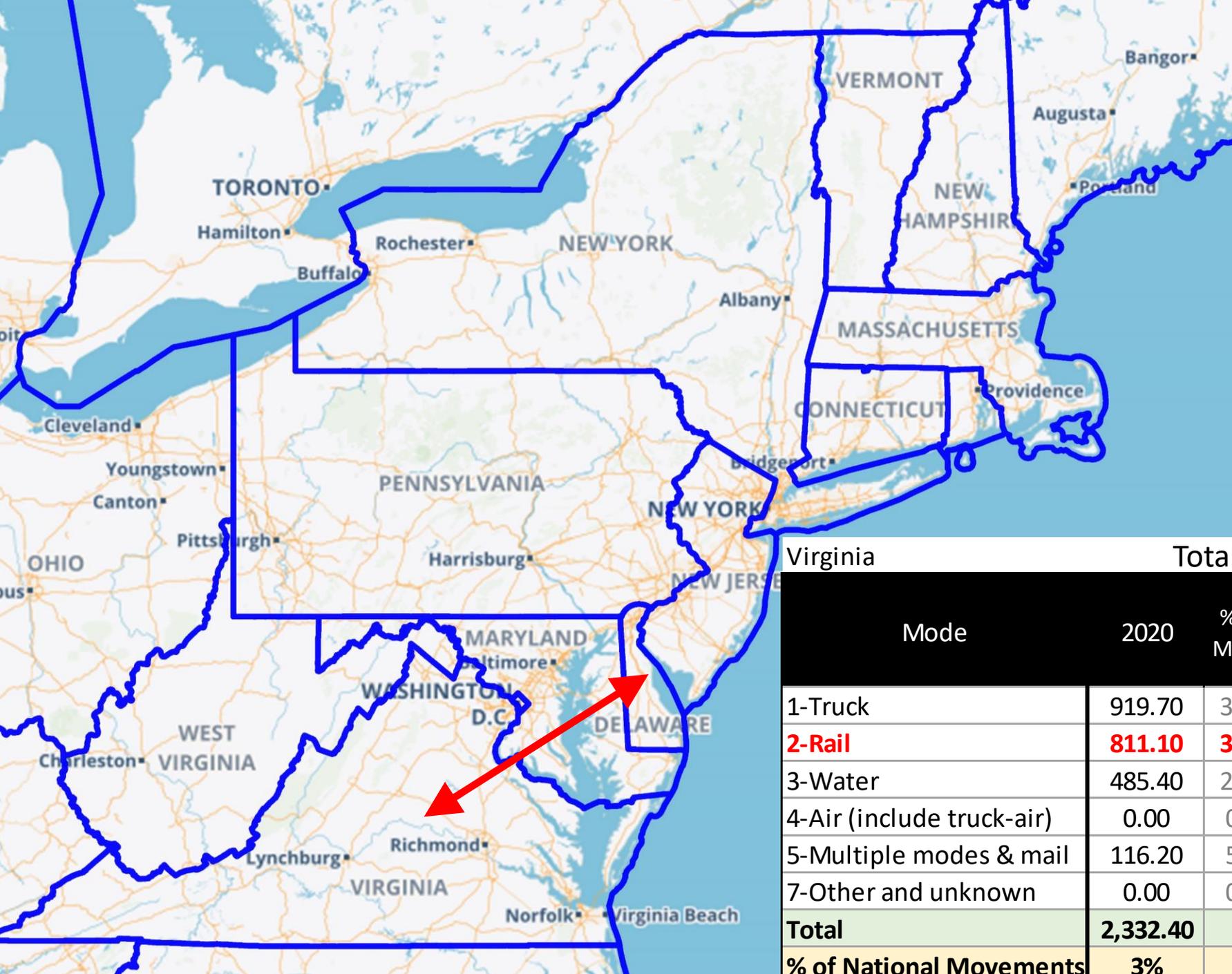
NJ		Total Tonnage				
Mode	2020	% of Mode	2050	% of Mode	2020 - 2050 Change	2020 - 2050 % Change
1-Truck	4,144.80	91%	7,503.10	93%	3,358.30	81%
2-Rail	229.20	5%	327.00	4%	97.80	43%
3-Water	96.00	2%	52.90	1%	-43.10	-45%
5-Multiple modes & mail	61.90	1%	155.60	2%	93.70	151%
7-Other and unknown	0.10	0%	0.40	0%	0.30	300%
Total	4,532.00		8,039.00		3,507.00	77%
% of National Movements	7%		7%			



Combined Inbound/Outbound Movements with DE

With New York

Mode	Total Tonnage					
	2020	% of Mode	2050	% of Mode	2020 - 2050 Change	2020 - 2050 % Change
1-Truck	935.30	76%	1,819.20	80%	883.90	95%
2-Rail	208.00	17%	316.80	14%	108.80	52%
3-Water	30.40	2%	28.60	1%	-1.80	-6%
4-Air (include truck-air)	0.00	0%	0.00	0%	0.00	0%
5-Multiple modes & mail	60.60	5%	108.90	5%	48.30	80%
7-Other and unknown	3.10	0%	8.50	0%	5.40	174%
Total	1,237.40		2,282.00		1,044.60	84%
% of National Movements	2%		2%			



Combined Inbound/Outbound Movements with DE

With Virginia

Mode	Total Tonnage					
	2020	% of Mode	2050	% of Mode	2020 - 2050 Change	2020 - 2050 % Change
1-Truck	919.70	39%	1,600.20	34%	680.50	74%
2-Rail	811.10	35%	2,432.30	51%	1,621.20	200%
3-Water	485.40	21%	595.30	13%	109.90	23%
4-Air (include truck-air)	0.00	0%	0.00	0%	0.00	0%
5-Multiple modes & mail	116.20	5%	134.00	3%	17.80	15%
7-Other and unknown	0.00	0%	0.00	0%	0.00	0%
Total	2,332.40		4,761.80		2,429.40	104%
% of National Movements	3%		4%			

- Basic Chemicals, Big mover with big tonnage!

Top OUTBOUND Trading Partners - 20-Basic chemicals

dms_orig	dms_dest	dms_mode	thousand tons in 2020	thousand tons in 2050	million dollars in 2020	million dollars in 2050
10-Delaware	51-Virginia	2-Rail	692.38	2,157.14	\$ 43.25	\$ 130.44
10-Delaware	42-Pennsylvania	5-Multiple mode	228.40	720.01	\$ 323.24	\$ 1,031.60
10-Delaware	48-Texas	5-Multiple mode	189.55	612.90	\$ 167.31	\$ 526.89
10-Delaware	34-New Jersey	1-Truck	189.18	591.76	\$ 27.37	\$ 71.61
10-Delaware	22-Louisiana	2-Rail	131.88	427.74	\$ 101.15	\$ 328.06
10-Delaware	05-Arkansas	2-Rail	127.22	402.37	\$ 97.57	\$ 308.60
10-Delaware	39-Ohio	1-Truck	82.26	263.55	\$ 547.69	\$ 1,754.60
10-Delaware	42-Pennsylvania	2-Rail	63.29	199.40	\$ 48.74	\$ 153.43
10-Delaware	48-Texas	2-Rail	60.85	195.20	\$ 46.62	\$ 149.83