



# Freight & Logistics

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## Cost of Congestion & Key Freight Bottlenecks — September 2022 Recap

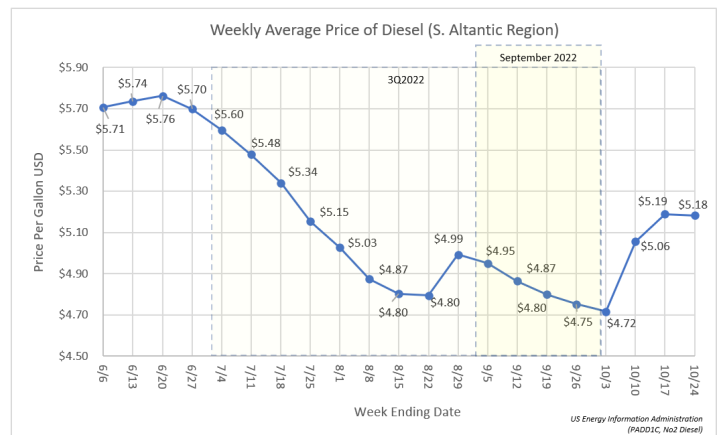
Delay and congestion cost commercial industry millions of dollars each year. This cost eventually becomes a burden on the sustainability of the freight transportation sector, and the cost of goods and services for the end-consumer. This can be as straightforward as friction between volume and capacity, but freight congestion can also represent the challenge of reconciling network functionality with economic behavior.

Performance Measure	Jul-22	% CHANGE	Aug-22	% CHANGE	Sep-22	% CHANGE	Quarterly Summary (Q3) *	Quarterly % CHANGE (Q1)
NCPFN System Total Commercial Cost of Delay	\$125,740,799	-2.0%	\$134,236,340	6.8%	\$131,950,942	-1.7%	\$ 130,642,694	-2.42%
NCPFN System Commercial Average Daily Cost per VMT	\$ 0.28	-3.4%	\$ 0.29	3.6%	\$ 0.30	3.4%	\$ 0.29	-3.3%
Commercial VMT on the NCPFN System	446,235,677	-0.5%	463,176,481	3.8%	440,717,285	-4.8%	<b>1,350,129,443</b>	-0.03%
NCPFN System Com. Vehicle-hours of Delay (#Hours)	1,251,277	-2.0%	1,335,818	6.8%	1,313,076	-1.7%	1,300,057	-2.48%
<i>NPMRDS Network Analysis</i>								* <b>BOLD</b> = Total <i>Italics</i> = Average
Top 10 Bottlenecks Total Cost of Delay	\$ 6,174,271	4.2%	\$ 5,862,838	-5.0%	\$ 5,732,027	-2.2%	\$ 5,923,045	7.5%
Top 10 Bottlenecks % of Total Cost	4.91%	6.4%	4.37%	-11.1%	4.34%	-0.5%	4.54%	10.1%
Top 10 Bottlenecks Average Daily Total Cost of Delay	\$ 199,170	0.8%	\$ 189,124	-5.0%	\$ 191,068	1.0%	\$ 193,120	6.2%
Commercial VMT on Top 10 Bottlenecks NCPFN System	16,098,264	41.5%	12,552,693	-22.0%	15,593,871	24.2%	<b>\$ 44,244,828</b>	50.1%
Top 10 Bottlenecks Cost per VMT	\$ 0.38	-26.9%	\$ 0.47	23.7%	\$ 0.37	-21.3%	\$ 0.41	-29.5%

Rank	Previous Rank	September 2022 Bottleneck Locations	Average Daily Delay*	Events or Incidents	Division
1	1	I-40 East at US-70, Exit 306 between Garner and Clayton	2 h 20 m	14	5
2	11	I-26 West at NC-146 Exit 37 south of Asheville	2 h 48 m	49	13
3	18	I-485 East at NC-16, Providence Road, Exit 57 in Charlotte	1 h 54 m	9	10
4	2	I-85 South at NC-273, Exit 27 between Charlotte and Belmont	1 h 15 m	7	10
5	53	I-85 North at NC-7, Exit 23 east of Gastonia	1 h 22 m	12	12
6	66	I-85 South at Statesville Avenue, Exit 39 in Charlotte	40 m	13	10
7	105	I-485 East at John Street, Exit 52 east of Matthews	38 m	14	10
8	20	I-85 North at Graham Street, Exit 40 in Charlotte	1 h 37 m	7	10
9	15	I-40 West at US-15/US-501 between Durham and Chapel Hill	2 h 10 m	5	5
10	68	I-77 North at Woodlawn Road, Exit 6 in Charlotte	1 h	7	10

\* hours per day in which congestion was present

In September 2022, the Statewide Priority Highway Freight Network experienced a small improvement in congestion with total commercial congestion costs decreasing by 1.7% to \$131.95M, as well as a more significant 4.8% reduction in commercial vehicle miles traveled on the network during the month to just over 440.7M miles. September's improvement in overall congestion costs helps recover some of the nearly 7% increase experienced in August. Further improving the situation, across the region, diesel prices declined more than 5% during the month of September continuing an overall quarterly decline of more than 17% since the final week of June 2022. Despite these moves in the right direction, while overall congestion costs decreased, the average daily cost per VMT increased by one cent or 3.4% over August's figures. Continuing to look at the statistics from a quarterly performance viewpoint,



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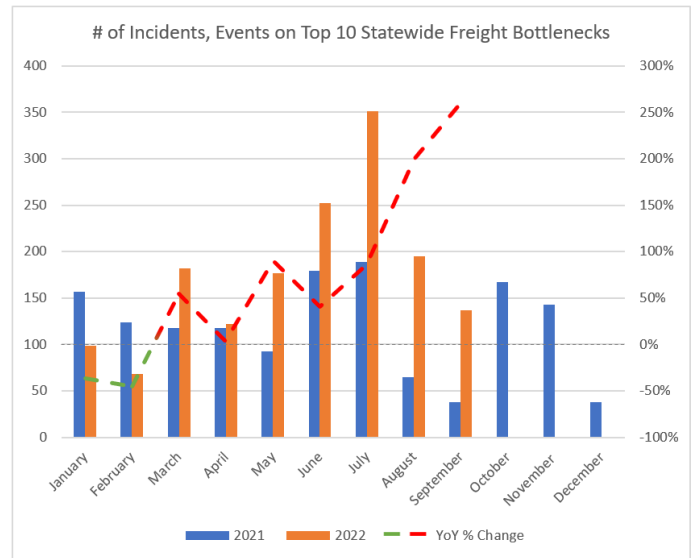
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## Cost of Congestion & Key Freight Bottlenecks, *continued*

the Statewide Priority Highway Freight Network experienced broad improvement in the third quarter over Q2 in each category tracked including a 2.42% reduction in total congestion costs and vehicle hours of delay, as well as a 3.3% improvement in the average daily cost per VMT. Overall traffic on the network improved by a nominal 433K miles during Q3 over the previous three-month period. The reduction in vehicle hours of delay and an overall reduction of fuel prices was a welcome change for drivers on the freight network in 3Q2022 reversing a troubling trend upwards in both categories during 2Q2022. The Top 10 Freight Bottlenecks on the network represented a 2.2% reduction in total delay costs relative to the entire freight network, however total VMT on the ranked bottlenecks increased by more than 24%, just 500K miles short of this year's high point of 16.1M miles in July. Overall third quarter Top 10 Bottleneck total VMT increased more than 50% over 2Q2022 as a higher concentration of third quarter bottlenecks were in dense urban areas than previously. Incidents and events were less of a factor in September with a further 42% reduction over August figures, signaling the first consecutive monthly reduction this year, however September's 137 incidents and events represents a 261% increase over September 2021. The overall annual trend is worrisome, increasing rapidly over 2021 figures.



## Key Supply Chain Issues Facing North Carolina

**Rail and maritime labor negotiations front and center for supply chain:** On September 15th, US freight rail companies and railroad labor unions reached a tentative agreement after operating without a contract for nearly three years. The September tentative agreement averted a management lockout or strike by the unions which would have had a major impact on the US economy. The Coordinated Bargaining Coalition and the United Rail Unions represent labor in the negotiations while the National Carriers Conference Committee (NCCC) represents freight railroads in the process. The tentative agreement was then presented to the railroad labor unions for ratification. Since then only six of the twelve unions have voted to ratify the contract while two unions have rejected the agreement, and four have yet to vote. While the agreement has provided a historic wage increase and protected health benefits, the remaining key issue at the center of negotiations is paid sick leave for railroad workers. In mid-October, the Brotherhood of Railroad Signalmen (BRS) voted against the agreement 60.57% to 39.23%. The BRS includes more than 6,000 members or about 5% of the 115K union members covered in the negotiations. Following the BRS vote, the NCC said it was “disappointed” that an agreement was not reached; however, the NCCC and BRS have agreed to continue operations without stoppage until early December. Previously, the Brotherhood of Maintenance of Way Employees Division\* (BMWE) which represents more than 26K workers who build and maintain tracks, bridges and other structures on railroads, voted against ratification with 54% in the majority. The BMWE returns to negotiations with the railroads staving off a lockout or work stoppage until early November. The six unions that have approved the agreement include the American Train Dispatchers Association, the National Conference of Firemen & Oilers, the International Brotherhood of Electrical Workers, the Brotherhood of Railway Carmen, the Transportation Communications Union, and the engineering division of the International Association of Sheet Metal, Air, Rail and Transportation Workers (SMART). Two of the largest unions that represent engineers and conductors, the Brotherhood of Locomotive Engineers and Trainmen, and SMART-Transportation Division have not yet voted on ratification.

In the maritime sector, negotiations at US west coast ports have been ongoing since the most recent contract's expiration in July 2022, with more than 22K longshoremen and other trade workers represented by the International Longshore and Warehouse Union (ILWU) and more than 70 employers including port operators represented by the Pacific Maritime Association (PMA). Uncertainty about these negotiations and recent supply chain issues including a backlog of vessels waiting to dock have pushed many shippers to divert volumes to US east coast ports. A simmering dispute involving jurisdiction over cold ironing (the process of connecting ships to shoreside power) at the Port of Seattle provided further concern with the dispute between the ILWU and SSA Marine, operator of the Port of Seattle, temporarily suspending negotiations. Despite this, west coast ports' executives are optimistic that an agreement can be reached. In an October statement, Port of LA/LB executive director Gene Seroka cautioned, “It's not going to get solved in the next few weeks — it will probably take some several months,” but declared himself optimistic that a mutually beneficial agreement could be reached. In the US gulf coast Port of Mobile (AL), an October 20th strike was narrowly avoided as the International Longshoremen's Association (ILA) and CSA Equipment Company, a stevedoring company, agreed to return to the bargaining process after a third management contract proposal was rejected. Jurisdiction over line handling is the key issue of concern for labor at the Port of Mobile. The master labor contract for the US east and gulf coast ports expires in September 2024, but early negotiations between the ILA and the US Maritime Alliance (USMX), the organization representing port employers, are expected to begin in late 2022.

\* When the BMWE was established in the late 19th century, employee and employee were both considered valid spellings. The BMWE maintains the outdated spelling out of respect for its organizational history.