



The *NCDOT Logistics + Freight Bulletin* is created and distributed by the NCDOT Office of Logistics + Freight. This update is dedicated to the internal NCDOT audience, as well as those closely engaged with NCDOT. The *Bulletin* will share current issues, trends, data, and analyses on freight + logistics across every mode while expanding awareness and understanding of the larger supply chain ecosystem in which multimodal freight transportation is an active and important player. If there are topics you'd like us to address, please feel free to email us and offer your ideas, suggestions, or questions. If you would like to share this with your group or colleagues, please do. Email us to sign up for future *Bulletins*.

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## TOP 10 STATEWIDE TRUCKING FREIGHT BOTTLENECKS— NOVEMBER 2020

Each month we analyze freight bottlenecks on the North Carolina Priority Highway Freight Network, more than 3,900 miles identified as important to freight transportation including interstates, state roads, and other key freight corridors. Bottlenecks as defined by the FHWA includes “any highway segment identified by a State DOT to have constraints that significantly affect freight mobility and reliability.” This can be as straightforward as friction between volume and capacity, but freight bottlenecks can also represent a challenge of reconciling the functionality of a highway system with the behavior of the economy. Shifts in manufacturing and distribution patterns may be a factor while incidents and crashes, both passenger and commercial vehicles, can significantly slow the fluidity of freight on the network. Here’s a review of the top 10 freight bottlenecks on the NCPHFN for November. Our top two return, but we see a lot of new faces on this month’s list driven up the rankings from event or incident impacts.

Rank	Previous Rank	November 2020 Bottleneck Location	Average Daily Delay*	Events or Incidents	Division
1	1	US-421 South at US-17/US-74 in Wilmington	21 h 25 m	1	3
2	2	I-40 East at US-70 Exit 306 between Garner and Clayton	1 h 43 m	17	5
3	207	I-40 East at NC-215 Exit 31 near Canton	17 m	5	14
4	16	I-26 East at US-64 Exit 49 in Hendersonville	51 m	12	14
5	284	I-85 North at Exit 26 near Belmont	20 m	4	10
6	147	I-85 North at Little Rock Road Exit 32 in Charlotte	21 m	13	10
7	12	US-19 North at I-240/US-70 in Asheville	10 h 55 m	0	13
8	8	I-77 North at Tyvola Road Exit 5 in Charlotte	45 m	13	10
9	46	I-77 North at NC-67 Exit 82 near Elkin	1 h 56 m	0	9
10	5	I-77 South at Trade Street, Exit 10 in Charlotte	39 m	9	10

\* Average amount of time per day that congestion is identified at this location

## ABOUT THE NCDOT OFFICE OF LOGISTICS + FREIGHT

The [NCDOT Office of Logistics + Freight](#) is supply chain management professionals at NCDOT dedicated to supporting and providing resources to NCDOT stakeholders at every stage of project delivery from planning through construction, ensuring infrastructure investment is connected to industry + commerce. We are dedicated to driving North Carolina’s development as the preeminent environment for freight transportation and logistics services. The Office of Logistics + Freight is also focused on promoting the understanding and facilitate freight + logistics development and activities throughout the state. We are available to provide relevant data, research, insight, and analysis for NCDOT project managers, planners, or stakeholders on freight activity and behavior across every mode of transportation.



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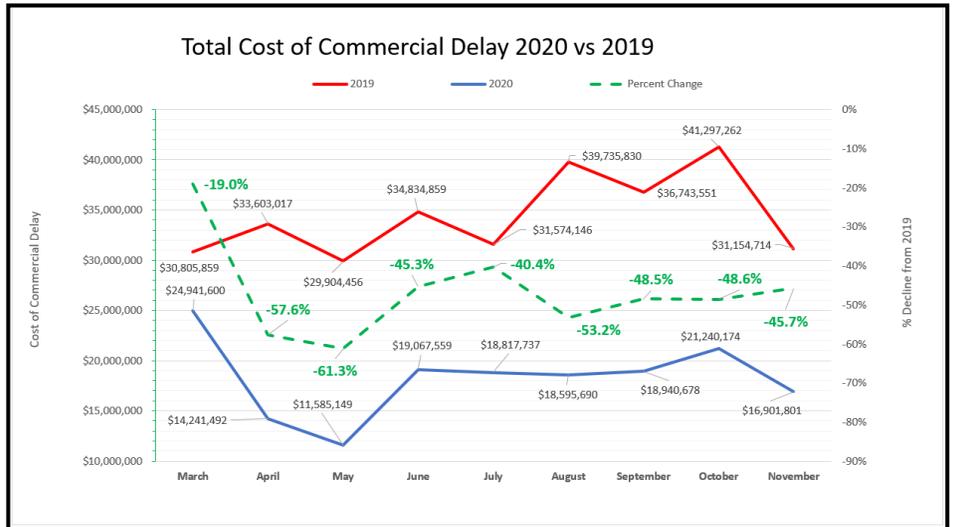


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# CONGESTION COSTS + PERFORMANCE METRICS for the NC Priority Highway Freight Network

Performance Measure	Sep-20	% CHANGE (month to month)	Q3 Quarterly Summary	Quarterly % CHANGE Q2-->Q3	Oct-20	% CHANGE (month to month)	Nov-20	% CHANGE (month to month)
Freight Network Travel Time Index (weekday)	0.93	1.1%	0.94	0.4%	0.93	0.0%	0.93	0.0%
NCPFN System Total Cost of Delay	\$ 18,940,678	1.9%	\$ 18,784,702	25.5%	\$ 21,240,174	12.1%	\$ 16,901,801	-20.4%
NCPFN System Average Daily Total Cost of Delay	\$ 610,990	1.9%	\$ 605,958	24.2%	\$ 685,167	12.1%	\$ 545,219	-20.4%
NCPFN System Average Daily Cost per VMT	\$ 0.07	0.0%	\$ 0.067	25.0%	\$ 0.07	0.0%	\$ 0.06	-14.3%
Top 10 Bottlenecks Total Cost of Delay	\$ 255,421	-23.6%	\$ 286,287	-12.1%	\$ 444,671	74.1%	\$ 315,565	-29.0%
Top 10 Bottlenecks % of Total Cost	1.35%	-25.0%	1.53%	-28.8%	2.09%	55.2%	1.87%	-10.8%
Top 10 Bottlenecks Average Daily Total Cost of Delay	\$ 8,239	-23.6%	\$ 9,235	-12.7%	\$ 14,344	74.1%	\$ 10,519	-26.7%
Top 10 Bottlenecks Average Daily Cost per VMT	0.29	-35.6%	\$ 0.353	-8.6%	0.32	10.3%	0.44	37.5%

**Congestion Cost Overview:** After a big jump in costs during October, the NC Priority Highway Freight Network experienced improvements in nearly every metric during the month of November. Continuing the trend set since March, November 2020 congestion costs are down more than 45% year over year, dramatically lower by comparison to 2019. Incidents and events on the freight network were down during November from the high water mark set in October for incidents and events since the start of the pandemic in March. The contributions of the top 10 bottlenecks shrunk in November, but nearly all are in or near urban centers.



## MULTIMODAL LOGISTICS + FREIGHT SECTOR BRIEFINGS



### POLICY

**All eyes on the federal COVID stimulus + 2021 appropriations bill:** On 21 December, Congress passed a landmark COVID relief and economic stimulus package with major implications for supply chain and transportation sectors. With \$45B directed to transportation, beneficiaries include airlines with \$15B, and an additional \$2B for airports, \$14B for transit, \$10B for state highway agencies and projects, and a \$1B allocation for Amtrak. An additional \$7B investment in improving and expanding broadband access will have significant implications for supply chain development. Now the bill awaits signature from the President before becoming law. For more, visit the [round-up from Politico](#).



### LOGISTICS

**Big holiday hiring in delivery, warehousing, trucking:** The holidays are a busy time for the supply chain as firms rush to get products to consumers ahead of Santa's arrival. According to the U.S. Bureau of Labor Statistics, the logistics sector including delivery, warehousing, and trucking operators hired more than 131,400 people in November, over three times more than in October. Messenger and carrier firms added 81,900 jobs alone with surging eCommerce sales driving activity. For more stats and discussion, check out the [WSJ article here](#).



As my 5 year old son sings when he sees a truck, "Here comes Amazon, here comes Amazon, right down Amazon lane..."



### RAIL

**Federal 2021 appropriations may make short line tax credits permanent :** In the consolidated appropriations bill for 2021, federal lawmakers extend the popular short line tax credit indefinitely. Introduced in 2005, the provision known as the 45G tax credit, currently offers a \$3,500 per mile tax credit for the construction, improvement, or maintenance of short line railways. Since its introduction, the railroad industry has invested more than \$5B in infrastructure, but longer term investment has been complicated by the uncertain future of the credit. With minor adjustments, the federal appropriations bill will continue to offer a \$3,500 per mile for up to 50% of the qualified track expenditures, dropping to 40% in FY2023. Short line railroads are significant resources often providing local or regionalized transportation for manufacturing and industry. There are more than 600 short line railroads operating in the United States including more than 20 active lines in North Carolina. For more on the implications of the bill for railroads, read the [full report from Freightwaves](#).



**NCDOT Rail Division grants \$16.7M in matching funding for rail infrastructure projects:** The state’s Freight Rail and Rail Crossing Safety Improvement (FRRCSI) Program began in 2013 through legislative action of the NC General Assembly. The program uses state funds and dividends from the NCRRT to support projects improving safety of rail crossings and improving freight service in North Carolina. The latest round of funding includes matching grant funds to infrastructure projects from 17 short line railroads. For more on the announcement visit [Progressive Railroadings here](#).



**Increasingly larger container ships may be a challenge for U.S. ports:** As container carriers continue to pursue profit through growing economies of scale on their vessels, there are significant complications for servicing vessels facing U.S. ports including equipment shortages, congestion challenges, harbor draft or bridge clearance issues, and the capacity of the supporting shoreside infrastructure. Through October, U.S. east coast ports saw 15% of vessel calls from ships of 10,000 TEU or greater in 2020. The first of these neo-Panamax container ships began service to the east coast in 2016 following the expansion of the Panama Canal. Delay or inefficiencies in servicing these larger vessels will have cost implications for transportation and supply chain operations—and by extension industry COGS and end-consumer prices. For more on this, visit the [Journal of Commerce’s story here](#).



**November trucking tonnage increases over October, but continues to lag 2019 figures:** Trucking freight tonnage grew 3.7% in November reversing October’s decline. Despite the good news, overall truck tonnage is down 3.8% compared to November 2019, now eight months of year-over-year decline. eCommerce sales growth and anticipation of a vaccine-fueled economic recovery are key drivers for this sector’s improvement. As capacity limitations and driver shortages continue to challenge the trucking sector rates continue to rise leading to increasing tender rejections. These dynamics in the trucking sector are driving [growth in leased freight vehicles](#) and intermodal railroad traffic as a now cost-competitive alternative. For more on the trucking sector, visit [Transport Topics](#).

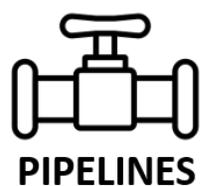
**Christmas tree sales exceed expectations with some retailers offering home delivery:** The holiday season usually includes a rush on spruce and fir trees as the staples of the Christmas holiday, but 2020 sales may show as much as a 10% increase YoY. Most regularly moved by truck, increasing shipping rates and strained trucking capacity have been a challenge for the sector, but shifts in purchasing including eCommerce sales and home delivery services have supported growth. Nationwide, Americans were expected to purchase more than 22 million trees during the holiday season. North Carolina is the second-ranked producer of Christmas trees behind Oregon, but together they control more than 50% of the overall U.S. market. Here’s [a good recap](#) on the market from Freightwaves.



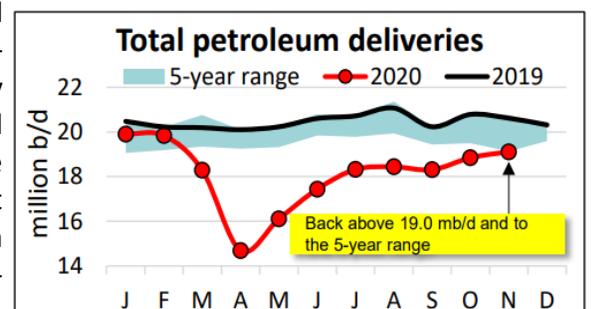
Popular tree variety Balsam Firs in transit via truck



**Continued improvement in air freight tonnage slowed in October:** Air cargo volumes between the U.S. and international points increased 13% by weight during October, slowing from the highest YoY increase of the year in September. The growth in the air freight volumes in October represents the 6th straight month of growth in the sector. Total freight tonnage both domestic and international, exceeded 1,697 trillion tons in October. More information including additional statistics and data is available online through the [Bureau of Transportation Statistics](#).



**November petrol demand bounces back to within normal 5-year range:** Continuing the trend of recovery, U.S. petroleum fuel demand reached 19.1 million barrels per day driven by increased activity from motor fuels, diesel, and jet fuel. Additional signs of economic recovery include growth in fuel prices, increased production, and the first refinery activity increase since July. The U.S. continues in its novel status as a petroleum net exporters despite seeing record lows in drilling activity. Despite these improvements, overall production and demand remain below 2019 levels. For more, visit the [API monthly statistical review](#).



Source: API



**A Freight Christmas Classic: Santa’s Highly Inefficient Christmas Journey:** Santa Claus is a surprisingly horrible logistician. Written a few years ago by William Salter, a truck routing and automation executive, [this article](#) is one of our holiday favorites. The in-depth article highlights some of St. Nicholas’ inefficiencies, as well as offers some advice for the Jolly One on improving operations. Enjoy this [lighthearted article](#) and may you and yours have a wonderful holiday season with best wishes from the NCDOT Office of Logistics + Freight. See you in 2021.