

LOGISTICS + FREIGHT BULLETIN



NCDOT is a part of your supply chain.

25 AUGUST 2020

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*.

ABOUT THE NCDOT OFFICE OF LOGISTICS + FREIGHT

The NCDOT Office of Logistics + Freight are 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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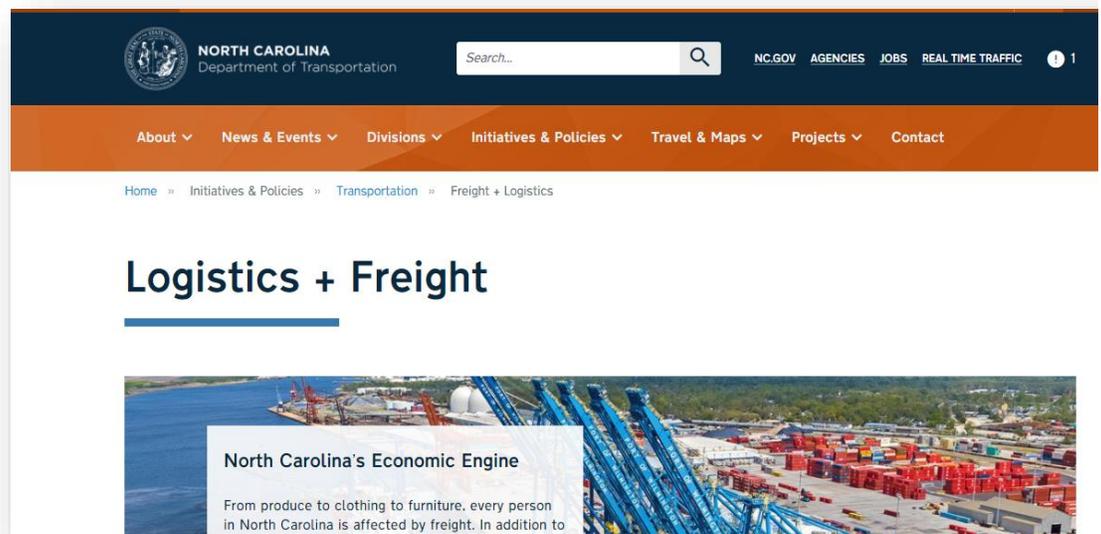


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CURRENT LOGISTICS + FREIGHT ISSUES + DATA

WE'RE LIVE!

[Check out our Logistics + Freight page at NCDOT.gov](#) for more information and resources.



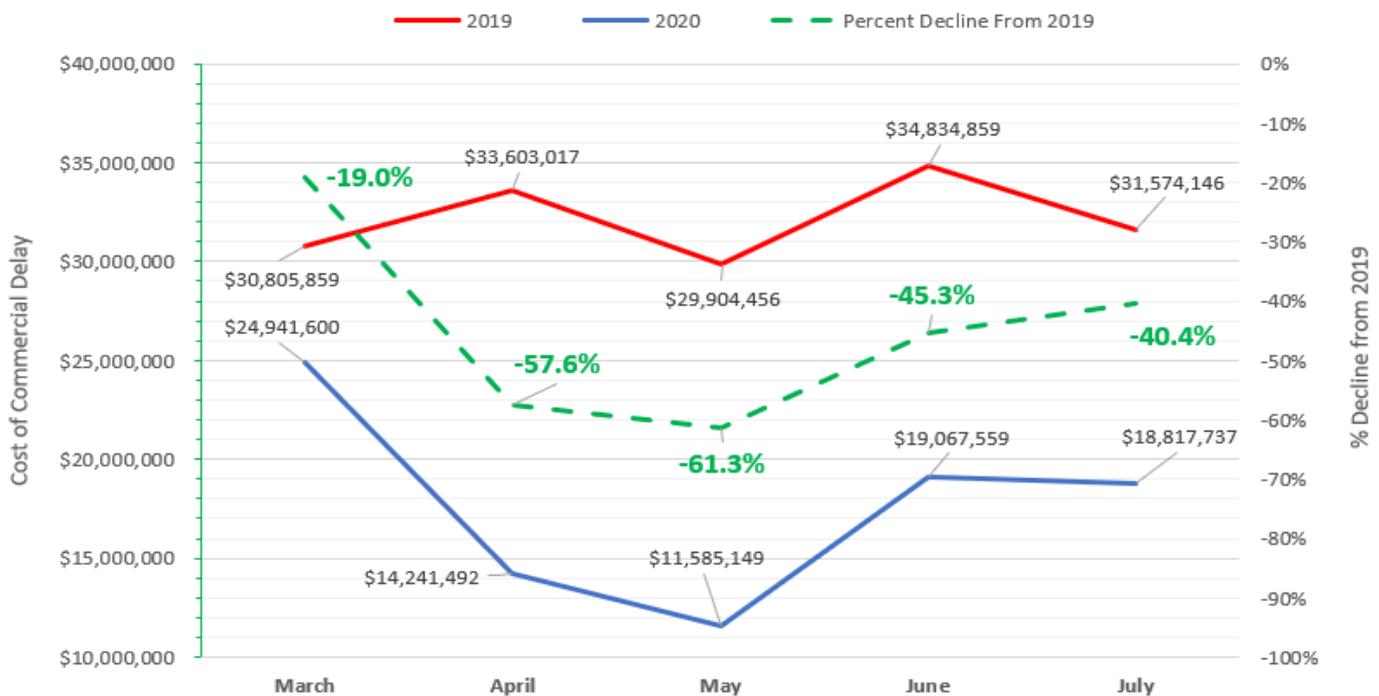
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Performance Measure	Apr-20	% CHANGE	May-20	% CHANGE	Jun-20	% CHANGE	Jul-20	% CHANGE
Freight Network Travel Time Index (weekday)	0.92	-1.1%	0.98	6.5%	0.92	-6.1%	0.98	6.5%
NCPFN System Total Cost of Delay	\$ 14,241,492	-42.9%	\$ 11,585,149	-18.7%	\$ 19,067,559	64.6%	\$ 18,817,737	-1.3%
NCPFN System Average Daily Total Cost of Delay	\$ 474,716	-41.0%	\$ 373,714	-21.3%	\$ 615,083	64.6%	\$ 607,024	-1.3%
NCPFN System Average Daily Cost per VMT	\$ 0.05	-44.4%	\$ 0.04	-20.0%	\$ 0.07	75.0%	\$ 0.06	-14.3%
Top 10 Bottlenecks Total Cost of Delay	\$ 171,298	-17.5%	\$ 294,754	72.1%	\$ 511,500	73.5%	\$ 269,229	-47.4%
Top 10 Bottlenecks % of Total Cost	1.20%	44.4%	2.54%	111.5%	2.68%	5.4%	1.43%	-46.7%
Top 10 Bottlenecks Average Daily Total Cost of Delay	\$ 5,710	-14.8%	\$ 9,508	66.5%	\$ 16,500	73.5%	\$ 8,685	-47.4%
Top 10 Bottlenecks Average Daily Cost per VMT	0.1	-58.3%	0.5	400.0%	0.56	12.0%	0.32	-42.9%

NOTE: default cost of hourly congestion based on Texas A+M Transportation Institute 2018 recommendations
 SOURCE: NCDOT Office of Logistics + Freight

Congestion Cost Overview: The North Carolina Statewide Priority Highway Freight Network, a network of 3,900 miles identified as important to freight transportation including interstates, state roads, and other key freight corridors, showed improvement in nearly every metric for July 2020. Despite a nearly 4% monthly increase in total VMT statewide, total delay costs for commercial transportation in July were down 1.3% to \$18.8M. This represents a 40%+ decline over commercial congestion costs for July 2019. The impact of bottlenecks on the network were significantly weaker in July as the total cost of delay for the Top 10 freight bottlenecks statewide dropped nearly in half from June 2020 figures. It is expected with the increase in economic activity including the return to school in late August, freight movement will see more passenger cars on the road...and the costly congestion that comes with it. Below is a graph of congestion costs starting in March at the height of stay-at-home orders and restrictions through July to further illustrate the significant impact of COVID-19 on the freight network.

Total Cost of Commercial Delay 2020 vs 2019



SOURCE: Analysis, NCDOT Office of Logistics + Freight

In North Carolina, the textile manufacturing sector is an integral part of the history and economic development of the state. With a fully globalized supply chain, textile manufacturing is complex and diverse. Major production centers in Asia serve the American market providing more than 80% of all textile and apparel goods consumed in the U.S. In North Carolina today research, development, and production of innovative fabrics, polymers, and material combinations drive growth this \$8B sector.



NC State University's Nonwovens Institute is a leader in advanced technology textile production and development.

North Carolina once anchored the thriving and beating heart of the global textiles sector. Leading firms like Greensboro-based Burlington Industries, by 1970 the world's largest textile manufacturer, helped draw growth in reputation and number of firms. Even as recently as 1992, North Carolina ranked first among U.S. states for textile production; however, international development and globalization have had a significant impact on the industry in the Old North State. Between 2002 and 2005 alone, North Carolina experienced an almost 30% job loss in the textile and textile product mills, and apparel sectors according to the NC Department of Commerce and the U.S. Bureau of Economic Analysis.

It is not all doom and gloom. North Carolina is currently the 4th largest textile production center in the U.S. supporting nearly 42,000 employees and a direct employment income impact of \$1.8B statewide. Nationally, textiles are enjoying a resurgence led by states like North Carolina and Georgia where favorable tax incentives, reliable utilities, and modern airports, seaports, and multimodal infrastructure supports a highly-skilled workforce. Both niche production and larger scale operations have found viable paths forward in the state leveraging improvements in manufacturing efficiency, environmental sustainability, and productivity. Technology beyond the factory is also a driver with the increasing importance of smart textiles including optical fibers, conductive polymers, and metals widely used in medical, transportation, sports, military, and other applications.

MOST SIGNIFICANT INDUSTRIES IN SECTOR BY GDP CONTRIBUTION



Source: NC Supply Chain: Conduit for Economic Connectivity (2016)

For textiles, like many other industrial sectors, COVID-19 and the extended shutdown of production centers in China and India created catastrophic supply chain challenges. While tariff deferrals and waivers have modestly helped ease global supply complications, the COVID-19 response provided domestic textile manufacturers with short term opportunity. Many textile and apparel companies promptly repurposed domestic and overseas production, supply chains, and distribution infrastructure make and deliver vital masks, gloves, gowns, and other personal protective equipment. Economically, the situation has also been challenging. According to business intelligence firm TBRC, the global textile market is expected to decline from \$673.9 billion in 2019 to \$655.2 billion in 2020 mainly due to economic slowdown due to COVID-19. Optimistic analysts forecast a recovery by 2021 and a return of nearly 7% growth annually over the next three years.



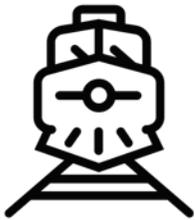
In this section, we will regularly share timely, current information, analysis, and context for freight logistics and transportation sector organized by mode. This will be a mix of current events, and recaps on data or reports issued recently relevant to multimodal freight movement and planning in NC, our region, our nation, and the global economy.



TRUCKING

COMMERCIAL MOTOR VEHICLE SAFETY GRANTS ISSUED: The Federal Motor Carrier Safety Administration (FMCSA) is investing nearly \$80M to enhance commercial motor vehicle (CMV) safety in what will be its largest targeted CMV investment to date. The FMCSA's grant program includes \$45M for high priority safety efforts advancing states' technological capabilities; \$37.2M for CDL implementation programs; and \$2M for educational institutions for targeted veteran training programs. Grant recipients included NC Dept. of Public Safety with more than \$1.8M for high priority programs and \$52K to NCDOT's Department of Motor Vehicles for CDL implementation. For more information, visit the [FMCSA grants page](#).

FULL SECURITY SCANNING PILOT AT NM BORDER: Non-invasive inspection will begin for all commercial vehicles at the U.S./Mexico border Santa Teresa Port of Entry to bolster contraband and smuggling detection. As a part of a U.S. Customs and Border Protection (CBP) pilot program, the New Mexico crossing will be the first of five entry points supported by \$570M from CBP's parent agency, the Dept. of Homeland Security. The x-ray apparatus installed at Santa Teresa will serve as an initial screening and officers will flag specific vehicles for a secondary inspection. Implementation for the program begins in October reaching operational status by mid-2021. Read more about the pilot [here](#).



RAIL

INTEROPERABILITY BETWEEN CLASS I RAILROADS NEARS 80%: With a December 2020 deadline set by federal mandate, Class I railroads in the U.S. have made significant strides in implementing Positive Train Control (PTC) across their networks. Interoperability, or the ability for tenant railroads to communicate seamlessly with their Class I host network, showed significant improvement from 58.7% in Q1 to 79% in Q2. For railroads that must comply with PTC, 98.8% of the 57,537 route miles were in operation or late stage testing by June 30. Currently, North Carolina is in excellent shape with 100% complete for all required route miles in the state. Class I railroads CSX and Norfolk Southern operate in North Carolina. To learn more about developments, visit the [FRA release here](#).



[Learn more about Positive Train Control from the Association of American Railroads in this quick video.](#)

LNG ON RAIL FACES LEGAL HURDLES: In June 2020, USDOT and the Pipeline and Hazardous Materials Safety Administration (PHMSA) authorized bulk transportation of liquid natural gas (LNG) by rail. Despite increased safety and operational requirements, fourteen states, the District of Columbia, and several environmental groups have filed suit in federal court citing environmental, safety, and public health concerns. The suit also argues that the new rules violate several relevant federal acts including the Hazardous Materials Transportation Act and the National Environmental Policy Act. North Carolina is not involved in the suit at this time, but other states involved include Maryland, New York, California, Delaware, Massachusetts, Michigan, Minnesota, New Jersey, Oregon, Pennsylvania, Rhode Island, Vermont, Washington and the District of Columbia. For more on these developments, visit the [Freightwaves recap](#).



MARITIME

NC PORTS REPORTS VOLUME INCREASES FOR FY20: At the end of the 2020 fiscal year on June 30, the NC Ports Authority reported YOY volume increases at both Wilmington and Morehead City facilities despite challenges from COVID-19. Container volume through the Port of Wilmington rose by 4% over 2019 while setting an agency record 13% annual increase for refrigerated container moves. Temperature-controlled cargo is an important niche for NC Ports who have grown refrigerated volumes by nearly 270% over the past 5 years. Chief commercial officer Hans Bean attributes growth during Coronavirus, “More customers are looking to NC Ports due to our ability to offer more supply chain and value delivery options. Read about the details [here](#).”

CAPACITY ADJUSTMENTS STRENGTHEN CARRIER FINANCIAL PERFORMANCE: The strategy of many container carriers to match their available capacity to COVID-19-weakened demand has proven successful improving overall financial performance for nearly all. By cutting more than 400 sailings in April and May, carriers were able to withdraw significant capacity on major trade routes and bolster rates. Carriers also enjoyed lower bunker consumption and prices, as well as reduced network costs. Tweaking capacity is good for carriers, but it is a challenge for cargo owners expecting supply chain reliability or affordability. Q2 rates for major carriers experienced a wide range of increases of 3% to as much as 8% per TEU. Read the JOC’s story [here](#).



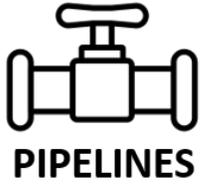
Luxembourg-based air freight carrier Cargolux’s Boeing 747-8 unveiled its new surgical mask nose art recently to highlight the dedicated freight carrier’s commitment to COVID-19 safe operations.



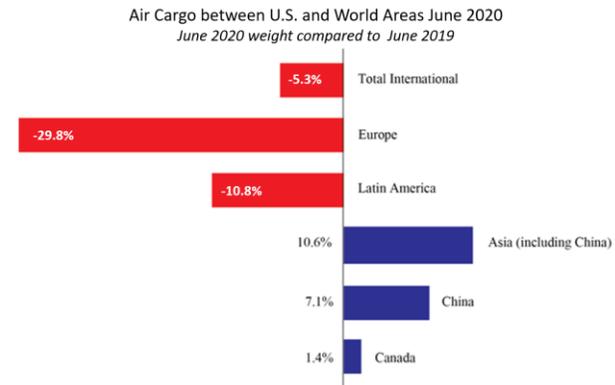
AIR CARGO

100% SCREENING OF AIR CARGO MAY IMPACT ECOMMERCE: Unless the U.S. Department of Homeland Security’s Transportation Security Administration (TSA) revises guidance or implements an eCommerce-specific protocol, requirements for full 100% screening of air cargo will place a significant burden on eCommerce providers who do not currently have the costly screening equipment to comply. The issue is causing a rift between eCommerce providers like Amazon, Walmart, or FedEx and the freight forwarding industry, yet both agree the nuance of the issue will be overlooked without TSA action. The agency is currently considering development of a regulatory program for eCommerce fulfillment centers, warehouses, 3PLs or other sites that process air cargo. Either way, this is an issue to watch closely relevant to end-consumer costs. For eCommerce providers there are significant cost or investment implications if a flexible alternative is not developed. Learn more from [American Shipper](#).

AIR FREIGHT VOLUMES STILL DOWN YOY: According to the U.S. Bureau of Transportation Statistics U.S. and foreign airlines carried 5% less cargo by weight between the U.S. and foreign points in June 2020 than in June 2019, despite a rise of almost 11% in cargo between the U.S. and Asia. The bright side is that June’s decline was smaller YOY losses in March (down 17%), April (down 16%) and May (down 14%).



RECOVERY SLOW BUT HAPPENING: According to the American Petroleum Institute, the slow recovery from COVID-19’s initial impact continued in July with increases in demand, refinery production, and refinery capacity; however, overall U.S. petroleum demand remained down by 11.9% YOY. US crude oil production and drilling activities are also down chipping away at recent record highs and the U.S. continued as a petroleum net importer for the third month in a row. As always, the API monthly report is a great read. Find it [here](#).



SOURCE: U.S. Bureau of Transportation Statistics



SUPPLY CHAIN + ECONOMY

ECONOMIC DEVELOPMENT + THE SUPPLY CHAIN: A tip of the hat to Amanda Conner at NCDOT Aviation for sharing [this article](#) with us. Written by a St. Louis-based economic developer, the piece has a lot of relevance for how we can view the dynamic, innovative, and robust supply chain ecosystem in North Carolina as one of our greatest recruiting tools.

Through these seemingly unending swings in economic momentum and unpredictability, changes in supply chains are putting added importance on the necessity of certain underlying community attributes required for a successful economic development project. More than ever, communities best positioned to win site selection projects for the foreseeable future will be ones that are both “deep regionally” and highly accessible globally. Regional depth in this case means many things, including a diversity of real estate options and communities to receive multiple components of any one company’s supply chain within the same area; a depth and diversity of talent in the area to support all aspects of the supply chain, including a future workforce accessible and recruit-able to the area; and availability of reliable and affordable industrial infrastructure. Being highly accessible globally means the company can readily access its customers throughout the country and around the world — both in terms of freight modes/transportation and with respect to a workforce skilled enough in the complexities of operating a global business from that community location.

Read the full article [here](#).

