



## Trucks Operated Safely at Heavier Weights under CARES Act Waiver and Reduced Carbon Emissions

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### **BACKGROUND**

The Safer Hauling and Infrastructure Protection (SHIP) Coalition is a joint effort of more than 80 of the nation's most prominent manufacturers, agribusinesses, and trade associations, and the leading safety voice in building a more environmentally friendly, safe, and modern trucking system. The SHIP Coalition believes an opt-in pilot program to modestly increase gross vehicle weight (GVW) limits on federal Interstates in ten states would align with efforts to mitigate climate pollution in our nation's transportation infrastructure. Despite major advancements in vehicle safety and paving technology, GVW laws have not been updated since 1982. Bringing trucking into the 21<sup>st</sup> century will reduce greenhouse gas emissions in the transportation sector, make roads safer for families and drivers, and minimize congestion on state and local roads.

As a Coalition, our member companies are focused on making improvements to the country's supply chains to reduce their carbon footprint and increase efficiency in delivering goods to the American people, especially during the COVID-19 pandemic. The Rocky Mountain Institute, an independent, nonpartisan, nonprofit organization whose mission is to transform global energy use to create a clean, prosperous, and secure low-carbon future, has endorsed the Coalition's proposed pilot program and verified it would help mitigate the impacts of climate change. The Institute notes that the transportation sector is responsible for 29 percent of greenhouse gas emissions and indicates that the Coalition's pilot program "is an example of the needed innovative pilot program that will help the trucking sector and customers develop and deploy sustainable solutions to climate change and will result in a reduction of greenhouse gases." Based on payload efficiency alone, the Rocky Mountain Institute Found that a six-axle, 91,000-pound vehicle configuration would result in 21,400 fewer metric tons of carbon dioxide (CO<sub>2</sub>) per year per truck.

USDOT's 2015 technical study work found that the 6-axle truck at up to 91,000 lbs. GVW would reduce fuel consumption, CO<sub>2</sub>, NOX, and congestion costs.<sup>1</sup> Two separate studies suggest that a six-axle, heavier than 80,000-pound vehicle configuration would reduce particulate matter.<sup>2</sup> Additionally, a U.S. Department of Transportation study on truck size and weight found

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<sup>1</sup> US DOT Comprehensive Truck Size & Weight Limits Study Technical Reports, Vol. I "Technical Summary Report", June 2015, p. 40

<sup>2</sup> American Transportation Research Institute and the U.S. Environmental Protection Agency suggest a 6-axle, heavier than 80,000-pound vehicle configuration would reduce particulate matter- 2009 Wisconsin Truck Size and Weight Study. Adams et al. A 2009 study by the American Transportation Research Institute found that particulate matter emissions were lower for a six-axle 100,000-pound vehicle that operates on the Interstate when compared to a five-axle 80,000-pound vehicle that operates on a non-Interstate route parallel to an Interstate highway. Tunnell, M.A. Estimating Truck-Related Fuel Consumption and Emissions in Maine: A Comparative Analysis for a 6-axle, 100,000 Pound Vehicle Configuration. Maine Department of Transportation. Augusta, ME. September 2009

that a six-axle, 91,000-pound truck would reduce nitrogen oxides, thus reducing a particulate matter precursor<sup>3</sup>. These studies, in tandem with the Rocky Mountain Institute's endorsement, emphasize the impact common sense proposals to modernize trucking can have to combat climate change immediately in the sector most responsible for greenhouse gas emissions.

## CARES ACT

In 2020, under the CARES Act and the previous Administration's COVID-19 emergency declaration, states were authorized to issue permits allowing trucks to operate above federal weight limits on the Interstate Highway System. Many states did issue such permits, which helped transport vital goods to stores faster. With the shortage of many critical goods as a result of COVID-19, multiple companies in this Coalition used this waiver to secure the supply chain and help American families access food, water, and products important to daily life and COVID-19 prevention, like cleaning supplies and personal hygiene products. During the 120-day period for such permits, our participating member companies collected data regarding truck operations carrying their cargo at the higher gross vehicle weights permitted by various states. Importantly, all the companies found no increase in reportable accidents on the heavier configuration, as well as reductions in carbon dioxide (CO<sub>2</sub>) emissions. But, by operation of other law, that authority expired on July 12, 2020, even though the emergency continues.

We believe the positive outcomes of the waivers warrant an extension of the permit authority through a ten-state opt-in pilot program. The SHIP Coalition stands ready to work with Congress to make this statutory change. Below you will find specifics of how the emergency authority was utilized and resulting data.

## CASE STUDIES

### **Company 1**

Company 1 undertook a pilot program in Texas utilizing the emergency permit authority. Approximately 200 truckloads were moved at an average gross vehicle weight (GVW) of 88,000 pounds. There were two other pilot programs of approximately 200 truckloads with a payload of roughly 85,000 pounds GVW. Carriers for the company reported **no additional safety concerns** as a result of additional payload.

The pilot saved 2.78 metric tons of carbon dioxide equivalent (MTCO<sub>2</sub>e) or 6,121 pounds of carbon dioxide, reduced the need for 54.6 trucks to move the same amount of material, saved 272 gallons of diesel, and saved 1,576 miles of driving.

If this was implemented across the company's use of tractor-semitrailers, it would save 38,322 MTCO<sub>2</sub>e or 16 percent of greenhouse gas emissions from transportation. This equates to 0.878 grams of carbon dioxide equivalent (gCO<sub>2</sub>e) per pound of product shipped in 2019. These results were akin to taking 8,279 cars off the road for a year, or the same amount of carbon that 50,047 acres of forest sequester in a year.

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<sup>3</sup> US DOT Comprehensive Truck Size & Weight Limits Study Technical Reports, Vol. I "Technical Summary Report", June 2015, p. 40

## **Company 2**

Starting on April 5, 2020, Company 2 increased its gross vehicle weight target from 80,000 pounds to 88,000 pounds on intra-Arkansas moves from several of their high-volume plants to distribution centers. They found that there were **no additional reportable accidents**.

When the company looked at year over year improvements due to the use of heavier trucks, they found an increase of 7.33 percent utilization per shipment and an increase of 2,786 pounds per shipment. Due to the increased per vehicle capacity, they reduced their shipments by 600, and the miles traveled by 51,472 miles. The trucking efficiencies allowed by the waiver and the reduction in miles traveled saved 7,400 gallons of diesel and reduced CO<sub>2</sub> emissions by 165,000 pounds –all during a very brief time period.

## **Company 3**

Starting on April 2, 2020, Company 3 began to utilize the COVID-19 emergency permit authority to help grocery stores meet surging demands and restock essential beverages. Overall, Company 3 utilized the permit authority across eight different states with **no reportable accidents or additional safety concerns**.

The ability to increase truck weights allowed Company 3 to help grocery stores restock essential beverages faster and more efficiently. For example, for one route, Company 3 was able to add an extra 4,500 pounds of product to each delivery. The additional 4,500 pounds on each truckload equates to an additional 140 cases, or roughly 3,920 water bottles per shipment. Company 3 was able to reduce total truckloads for these shipments in one state by 10 percent, allowing Company 3 to deliver an estimated additional 1.8 million bottles in the same amount of shipments.

Aggregated across eight states, Company 3 was able to reduce an estimated 300 truckloads from its operations, which not only allowed essential beverages to get to customers more efficiently but also reduced greenhouse gas emissions, as the reduction in miles equates to over 68,000 pounds of CO<sub>2</sub> avoided from transport tractors. Overall, Company 3 was able to get an estimated 400,000 additional cases of product, or 1 million bottles, to our customers faster (this estimate uses a blended volume of bottles per pallet figure) due to the emergency permit authority to increase truck weights.

## **Company 4**

Company 4 recently conducted outreach to a group of its small and medium-sized (SME) carriers to determine whether utilizing this opportunity increased reportable accidents. Though the data is preliminary, for every SME carrier that used the temporary waiver to operate vehicles at a gross vehicle weight higher than 80,000 pounds, **none reported an increase in reportable accidents** since utilization started in mid-April. One specific carrier reported that approximately 23 percent of their loads were over the regular Federal weight limit during the waiver period, with **zero reportable accidents**.