

A Proactive Approach

to Weather Risks:

## How to Keep Commercial Drivers

**Informed and Prepared** 

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#### **Keep Your Fleet Safer and**

#### Reduce Costs with Drivewyze Safety+

Every commercial fleet, no matter the size, is impacted by inclement weather. According to the US Department of Transportation (DOT), weather-related vehicle incidents are more lethal than natural disasters like tornadoes and hurricanes<sup>1</sup>. Each year, carriers lose around 32.6 billion vehicle hours as a result of weather-related congestion. This results in delayed shipments, significant costs, and joepardizes driver safety.

This e-book walks you through how adverse weather impacts carriers, with detailed studies and statistics around how driver safety and carrier costs are severely impacted.

More importantly, you will learn how the ability to legally bypass weigh stations can save carriers significant costs through idle reduction, faster deliveries, and lower fuel consumption. You will understand how existing solutions fall short due to limited safety resources, time-consuming manual processes, and alert fatigue from drivers receiving too many fleet-wide alerts.

#### Drivewyze Safety+ Minimizes Weather-Related Incidents by:

- Using more accurate and efficient weather notification systems that save the carrier's safety department time and resources
- · Delivering real-time weather alerts to a driver's ELD or mobile device
- · Sending alerts that are relevant only to the driver's immediate area

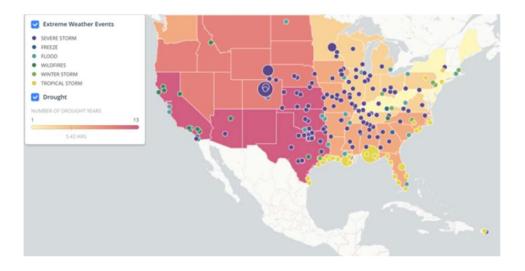
The e-book also includes a success story with a Drivewyze customer, C.R. England, that deployed Drivewyze Safety+ for significant ROI for its weather safety strategy.

As a bonus, readers can avail of a **30-day free trial** of the revolutionary trucking safety software and also request for an exclusive demo to learn exactly how to enhance ROI and driver satisfaction.<sup>1</sup>

#### **32.6 Billion** vehicle hours are lost annually due to weather-related congestion and traffic

**21%** of vehicle crashes were related to inclement weather over a ten year DOT analysis

As hazardous weather conditions delay shipments and jeopardize driver safety, carriers can experience significant costs in equipment remediation, insurance liability, and operational inefficiencies. Driving incidents are typically associated with winter conditions, but severe weather can impact drivers at any time of year and in any region. As climate change progresses, drivers are more likely to face risky weather conditions – such as flooding, severe storms, and fog – in all seasons across North America.



Carriers can't control inclement weather. However, they can manage driver preparedness and plan accordingly for weather-related risks. When drivers know about weather events in their immediate area, they can respond proactively and avoid or mitigate potential incidents.<sup>2</sup>

If carriers want to avoid overwhelming drivers with weather notifications, they need fleet technology that delivers real-time localized alerts relevant to drivers.

This solution can reduce injuries, property damage, and fatalities and improve the carrier's overall safety profile.

### 66

The latest FMCSA data showed that weather was a factor in 20% of truck crashes that resulted in death and 12% that resulted in injuries. It also created 13% of property damage. It's very clear that early warning can help prevent accidents involving trucks.

- Brian Heath, CEO of Drivewyze

### How Adverse Weather Impacts Carriers

#### **Driver Safety**

Severe weather poses serious safety risks to drivers, causing major delays, inconveniences, and in some cases, serious injuries or fatalities. There are approximately two million truck drivers<sup>6</sup> in the US, which means that about one in five drivers experienced a crash in 2020.<sup>7</sup> The risks and stress associated with weather-related safety, combined with the pressure of delivery schedules and traffic, may also exacerbate driver recruitment and retention issues.

### 1 in 3

One in three truck drivers has had a serious crash during their career, while one in eight has had two or more.<sup>3</sup>

#### **1000**x

Truck drivers are a thousand times more likely than the average motorist to experience a crash.<sup>4</sup>

#### 28%

Large truck crash fatalities were 28 percent higher in 2020 than ten years prior.<sup>5</sup>

#### **Carrier Costs**

Severe weather creates significant carrier costs due to delays, equipment remediation, and insurance liability. Almost a quarter of non-recurrent delays on US highways are caused by snow, ice, and fog,<sup>2</sup> with ice and snow events costing carriers over \$25 per lost hour.<sup>10</sup> Delayed or missed deliveries can also decrease customer satisfaction, impacting a carrier's reputation.

According to the last major DOT study, the average overall cost associated with a trucking incident was \$91,112 in 2007, the equivalent of \$132,197 in 2023.<sup>11</sup> Insurance liability hikes are one of the biggest challenges carriers face today. Premium costs per mile increased by 47% between 2011 and 2021, and most carriers now have a \$1 million minimum coverage amount.<sup>12</sup> Carriers that experience weather-related damages are likely to see a significant increase in their insurance premiums. **\$2.2-\$3.5 billion** annual cost of weather-related delays to carriers.<sup>8</sup>

**47%** increase in insurance premium costs per mile betweeb 2011 and 2021.

**\$250,000+** total cost in truck and trailer replacement after a serious incident.

#### **Bypass Eligibility**

A weigh station inspection takes five minutes on average, costing carriers about \$8.68 per stop.<sup>13</sup> The ability to legally bypass weigh stations can save carriers significant costs through idle reduction, faster deliveries, and lower fuel consumption.

When evaluating a truck's bypass eligibility, the US Department of Transportation considers a carrier's Inspection Selection System (ISS) score, an aggregation of its various Compliance, Safety, Accountability (CSA) scores. Weather-related incidents can reduce a carrier's safety score. Lowering bypass eligibility leads to more time and resources spent clearing weigh stations, impacting the carrier's bottom line.

Even with the number of accidents going down, the cost is going up. The insurance carriers want to see what you have done, not only with the occurrences that you have... [but] what you are doing to prevent future occurrences.

Brian Runnels, Vice President of Safety Reliance Partners

### Where Existing Solutions Fall Short

#### **Limited Safety Resources**

Smaller fleets typically have limited safety department resources, often with few to no dedicated weather-monitoring personnel. Any staff responsible for researching weather events and sending alerts to drivers is likely to balance this responsibility alongside other tasks. This can leave drivers without the timely communications needed to prepare for weather-related risks, potentially causing higher incident rates.

#### Manual Processes

Larger fleets typically have an established safety and weather department. However, outdated processes make delivering weather warnings to drivers difficult. Safety department staff are limited to manual weather research and driver communications, leading to overlooked risks and delayed alerts. As a result, drivers are often unable to stay ahead of inclement weather. This problem is compounded by the fact that drivers tend to read their text notifications when they stop for a break. This can mean they only see weather alerts when they are already in the vicinity and are too late to avoid adverse weather events.

#### **Alert Fatigue**

The time and resources required to manually research and send weather warnings across a fleet may prompt carriers to use blanket weather notifications. This means drivers receive fleet-wide alerts whenever there is severe weather — an average of 11 to 12 alerts a week<sup>14</sup>—regardless of location. For example, a driver in California would still receive an alert for a blizzard in Juno, Alaska.

This can desensitize drivers to repeated notifications, leading to ignored risks and delayed response times – even when the alert is relevant to the driver's location. Alert fatigue can also distract drivers and contribute to burnout. In other alert-intensive environments, such as the healthcare industry, workers experiencing alert fatigue override between 77 and 90 percent of alerts,<sup>15</sup> often causing critical judgment errors.

When safety departments are understaffed or use manual processes, carriers are more likely to:

- Overlook weather risks or send delayed weather notifications
- · Overwhelm drivers with fleet-wide weather alerts
- Leave drivers unprepared for localized weather risks
- Experience higher incident rates and insurance costs

TAXED STREET

## Carriers can improve driver safety during inclement weather by:

Using more accurate and efficient weather notification systems that save the carrier's safety department time and resources.

- Delivering real-time weather alerts to a driver's ELD or mobile device.
- Sending alerts that are relevant only to the driver's immediate area.

#### How Drivewyze Safety+ Minimizes Weather Related Incidents

#### **Keep Drivers Informed and Prepared**

Drivewyze Safety+ addresses these requirements by using trusted weather data from the National Oceanic and Atmospheric Administration (NOAA). When severe weather conditions are identified, in-cab alerts are only delivered when a weather risk is present within approximately 50 miles of the driver. This minimizes alert fatigue and ensures that drivers receive timely, accurate notifications — and, more importantly, those relevant to their location.

Drivewyze Safety+ covers 62 weather alerts, from blizzard warnings to wind advisories. In some states, Drivewyze Safety+ also warns drivers about regional weather laws, such as frost or tire chain laws, that apply to the driver's route.

With Drivewyze Safety+, carriers can manage in-cab messaging and use logged safety data to monitor fleet-wide risk trends and respond efficiently. Fleets can also use the Drivewyze Safety+ API to integrate data with their existing technology stack.

#### Drivewyze Safety+ Additional Features

Beyond providing weather alerts, Drivewyze Safety+ can improve a carrier's safety profile by:

- Monitoring fleet data. Observe fleet data to uncover high-risk areas, such as those prone to rollovers and low-height clearance.
- Using the in-cab driver coaching assistant. Communicate with drivers to advise on speeding and other fleet rules and reinforce good driver behaviors.
- Warning drivers about other risks. Notify drivers of safe parking areas, road closures, and potential cargo theft risks.
- Building custom alerts. Geofence locations and build customized alerts for areas relevant to the fleet — for example, customer yards or high-risk zones, like roadways where speeding citations are common.



#### **Drivewyze Safety+: Benefits for Your Fleet**

#### **Increases Driver Safety**

With relevant, real-time alerts, drivers can stay prepared for adverse weather events and avoid related delays, property damage, injuries, or fatalities. Drivewyze Safety+ also eliminates alert fatigue and distractions caused by other blanket weather notification solutions. Combined, these factors keep drivers safer, reduce stress, and even improve job satisfaction.



We invest heavily in technology. And we know the alerts we put out there worked — we saw a reduction in our accident rates.

Daniel Patterson, Director of Safety at Western Express

#### Saves Costs and Improves Your Bottom Line

Drivewyze Safety+ enables carriers to remove the burden of manual processes for their safety departments, saving time and resources. Drivers are more prepared for weather risks and experience fewer weather-related incidents. For carriers, this translates to cost savings in repairing and replacing equipment as well as insurance liability. By improving the carrier's safety score, Drivewyze Safety+ also makes drivers more eligible for weigh station bypasses for further cost savings.



Safety is a core function and it's ingrained in C.R. England's culture. Minimizing risk for our drivers is something we're always trying to do. Drivers have a tough job with traffic, weather, and delivery windows. Anything we can do to help them, we want to do."

Gerardo Granados, Safety Manager C.R. England

#### Drivewyze Safety+ Success Story: C.R. England

For C.R. England, the Salt Lake City-based trucking company, Drivewyze Safety+ has offered a significant ROI for its weather safety strategy. The company ran the beta version of Drivewyze Safety+ in the fall of 2020 and has since activated the technology across 4,761 trucks.

With a 16-person weather department, C.R. England saw a significant reduction in incidents year-overyear after integrating Drivewyze Safety+ fleet-wide. C.R. England drivers receive 18 alerts each month on average, about one each day and a half, minimizing alert fatigue. With just one jackknife avoided, the company considers Drivewyze Safety+ paid for -aworthwhile investment for a company that prioritizes safety as one of its core values.

#### 16 Employees

weather department sizes.

**18 Alerts** per truck per month on average with Drivewyze Safety+. **259,522** Weather alerts delivered over a 90-day period.

# Approach Weather Risks Proactively with Drivewyze Safety+

No carrier is immune to weather-related risks. Severe road conditions – from blizzards to high winds and flash floods – affect drivers in all locations and seasons, and are likely to impact carriers even more as climate change progresses.

An effective weather alerting system like Drivewyze Safety+ benefits the entire fleet, helping improve safety scores and lower the costs associated with equipment, road delays, and insurance liability. It also supports more efficient fleet safety departments, saving valuable resources while providing customized and timely driver notifications. Drivers are less likely to experience alert fatigue and are more responsive and prepared when facing inclement weather. By offering more effective safety support, carriers can also improve driver recruitment and retention.

Considering the cost of hazardous weather to a carrier, implementing an effective alerting system in your fleet - even if it prevents just one incident - is a prudent long-term investment.

#### **Promotes a Safety Culture**

Establishing an effective weather alert system is key to fostering a fleet-wide culture of safety and awareness. A proactive rather than corrective solution, Drivewyze Safety+ facilitates positive driver reinforcement. Drivers are more likely to approach non-weather related risks, such as speeding or driving in unfamiliar areas, more cautiously, further improving the carrier's ISS and CSA scores.

This approach demonstrates to insurers that the carrier is doing its due diligence and shows drivers that the carrier prioritizes safety. With an effective weather safety strategy in place, carriers are more likely to attract and retain drivers.

#### Get Started with a 30-day Free Trial

Discover how Drivewyze Safety+ will keep your drivers safe, improve your bottom line, and minimize insurance costs.

Start a 30-day free trial of Drivewyze Safety+ today across your entire fleet or for select drivers. Click here to get started, or contact us at 1-888-988-1590.

# Resources

<sup>1</sup>US Department of Transportation. "How Do Weather Events Impact Roads?" Road Weather Management Program. Last modified February 1, 2023. https://ops.fhwa.dot.gov/weather/q1\_roadimpact.htm.

<sup>2</sup>Center for Climate and Energy Solutions. "Extreme Weather and Climate Change." Climate Basics. Accessed April 12, 2023. https://www.c2es.org/content/extreme-weather-and-climate-change/.

<sup>3</sup>Centers for Disease Control and Prevention. "Trucker Safety." CDC Vital Signs. Last modified March 3, 2015. https://www.cdc.gov/vitalsigns/truck-safety/index.html.

<sup>4</sup>Casper, Meadows, Schwartz, and Cook. "Are Truckers More Likely To Get In A Crash?" Published November 24, 2020. https://www.cmslaw.com/blog/2020/november/are-truckers-more-likely-to-get-in-a-crash-/.

<sup>5</sup>Insurance Institute for Highway Safety. "Fatality Facts 2020." Fatality Statistics. Accessed April 12, 2023. https://www.iihs.org/topics/fatality-statistics/detail/large-trucks#trends.

<sup>6</sup>U.S. Bureau of Labor Statistics. "Heavy and Tractor-trailer Truck Drivers." Occupational Outlook Handbook. Last modified September 8, 2022. https://www.bls.gov/ooh/transportation-and-material-moving/heavy-and-tractor-trailer-truck-drivers.htm.

<sup>7</sup>Federal Motor Carrier Safety Administration. "Large Truck and Bus Crash Facts 2020." Data and Statistics. Last modified March 6, 2023. https://www.fmcsa.dot.gov/safety/data-and-statistics/large-truck-and-bus-crash-facts-2020#A4.

<sup>8</sup>US Department of Transportation. "How Do Weather Events Impact Roads?" Road Weather Management Program. Last modified February 1, 2023. https://ops.fhwa.dot.gov/weather/q1\_roadimpact.htm.

<sup>°</sup>US Department of Transportation. "How Do Weather Events Impact Roads?" Road Weather Management Program. Last modified February 1, 2023. https://ops.fhwa.dot.gov/weather/q1\_roadimpact.htm.

<sup>10</sup>US Department of Transportation. "Regional Assessment of Weather Impacts on Freight." Federal Highway Administration. Last modified May 11, 2020. https://ops.fhwa.dot.gov/publications/fhwahop16044/chap4.htm.

<sup>11</sup>Zaloshnja, Eduard and Miller, Ted. "Unit Costs of Medium and Heavy Truck Crashes." US Department of Transportation. Published March 2007.

https://www.fmcsa.dot.gov/sites/fmcsa.dot.gov/files/docs/UnitCostsTruck%20Crashes2007.pdf.

<sup>12</sup>Leslie, Alex and Murray, Dan. "The Impact of Rising Insurance Costs on the Trucking Industry." American Transportation Research Institute. Published February 2022. https://truckingresearch.org/wp-content/uploads/2022/06/ATRI-Rising-Insurance-Costs-02-2022.pdf.

<sup>13</sup>Brown, V.J.; Balducci, P.; Mahadevan, K.; Murray D.; McDonald, W.; and McFadden, M.. "Economic Analysis and Business Case for Motor Carrier Industry Support of CVISN (Commercial Vehicle Information Systems and Networks)." United States Department of Transportation. Published October 2, 2007. https://rosap.ntl.bts.gov/view/dot/34576.

<sup>14</sup> Based on a 90-day analysis of Drivewyze Safety+ customer data.

<sup>15</sup> Kengfai Wan, Paul; Satybaldy, Abylay; Huang, Lizhen; Holtskog, Halvor; and Nowostawski, Mariusz. "Reducing Alert Fatigue by Sharing Low-Level Alerts With patients and Enhancing Collaborative Decision Making Using Blockchain Technology: Scoping Review and Proposed Framework (MedAlert)." Journal of Medical Internet Research. Published October 28, 2020. https://www.jmir.org/2020/10/e22013.