SOLERA Fleet Solutions | Omnitracs

Analyzing 2021 trends to drive your business optimization forward

Fleet Industry Intelligence Report:
Fall 2021 Edition

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Introduction

Transformation occurs all around us, stemming from innovation and influence throughout the world and its many corners. For many, 2020 was a year of forced transformation in which we found ourselves simultaneously halted and moving with unmatched vigor. The COVID-19 pandemic transfixed the global stage and completely reshaped our lives — and industry.

In early spring 2021, Omnitracs released the first-of-its-kind Industry Intelligence Report: Understanding the Present to Predict the Future, which comprehensively explored long-haul and last-mile transportation activity and safety trends in 2020. This data was analyzed by Omnitracs data scientists to give fleet pioneers the insights needed to develop their business goals.

This fall, we present the second edition of our Industry Intelligence Report, which focuses on 2021 long-haul, last-mile, seaport, and safety transportation activity in the winter, spring, and summer. The eye-opening and vital transportation insights spotlighted in this report can significantly help strategize your operations and optimize business goals for continuing success.

Daily, we track more than 680,000 assets and receive more than 553 million vehicle positions.

In addition to this robust visibility, this report is made possible by our database comprised of:

- **Hundreds of millions of daily vehicle events across North America**
- **100 billion long-haul miles**
- **Half a billion last-mile stops across various industry sectors**

Read the following report to gain unmatched industry comprehension into last-mile and long-haul transportation activity, comparative seaport and trucking trends, and critical safety metrics.

Long-Haul Transportation Activity

Long-haul transportation, also referred to as over-the-road, encompasses much of our nation's freight movement. Under this sector, commercial vehicles travel across state and country borders to keep billions and billions of dollars' worth of goods flowing to support our economy.

The United States Department of Transportation (DOT) recently underscored rampant driver turnover among long-haul companies. According to the U.S. DOT, turnover rates for long-haul carriers are at:

90%
for large companies

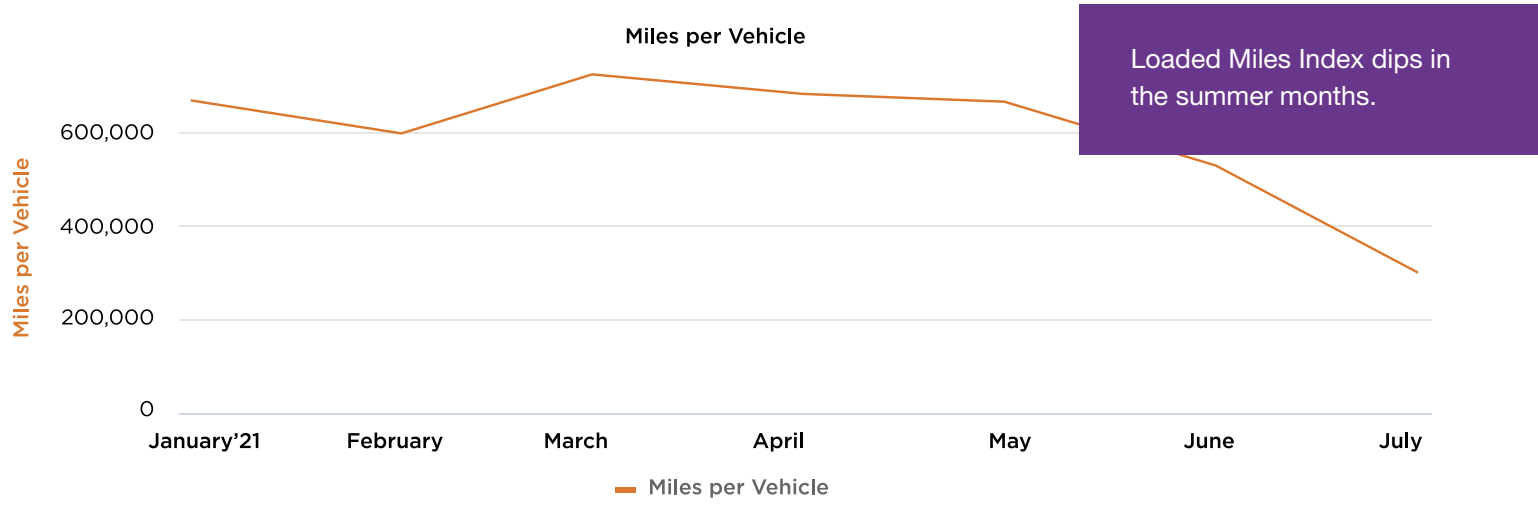
72%
for small businesses

These turnover metrics and the longstanding presence and impact of the coronavirus pandemic have severely disrupted the industry, with key transportation leaders affirming their commitment to truck drivers and the supply chain.

Our five comprehensive findings on long-haul activity represent transportation activity among customers and other long-haul carriers and substantiate the impact rampant driver turnover has on long-haul activity.

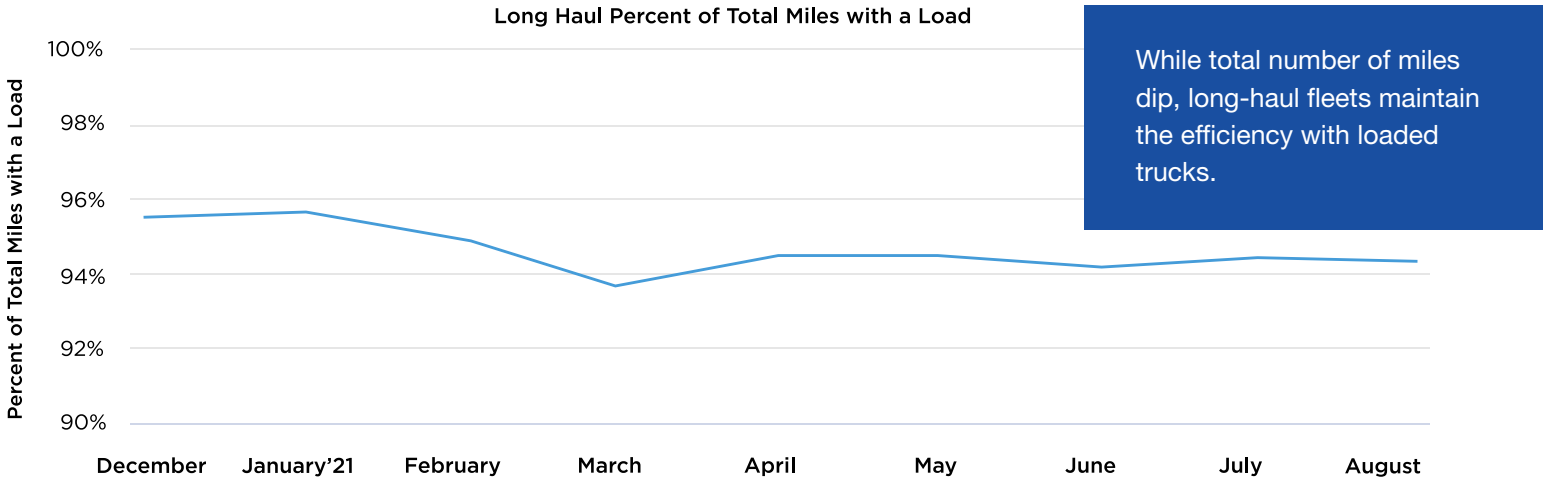
Figure 1: **Total Miles Traveled for Long Haul Vehicles**

Includes approximately 100 long haul carriers.



Overall, the miles traveled per long-haul vehicle remained somewhat steady from January through May 2021. Then, there was a substantial decline beginning in May, rapidly accelerating downward in June and July.

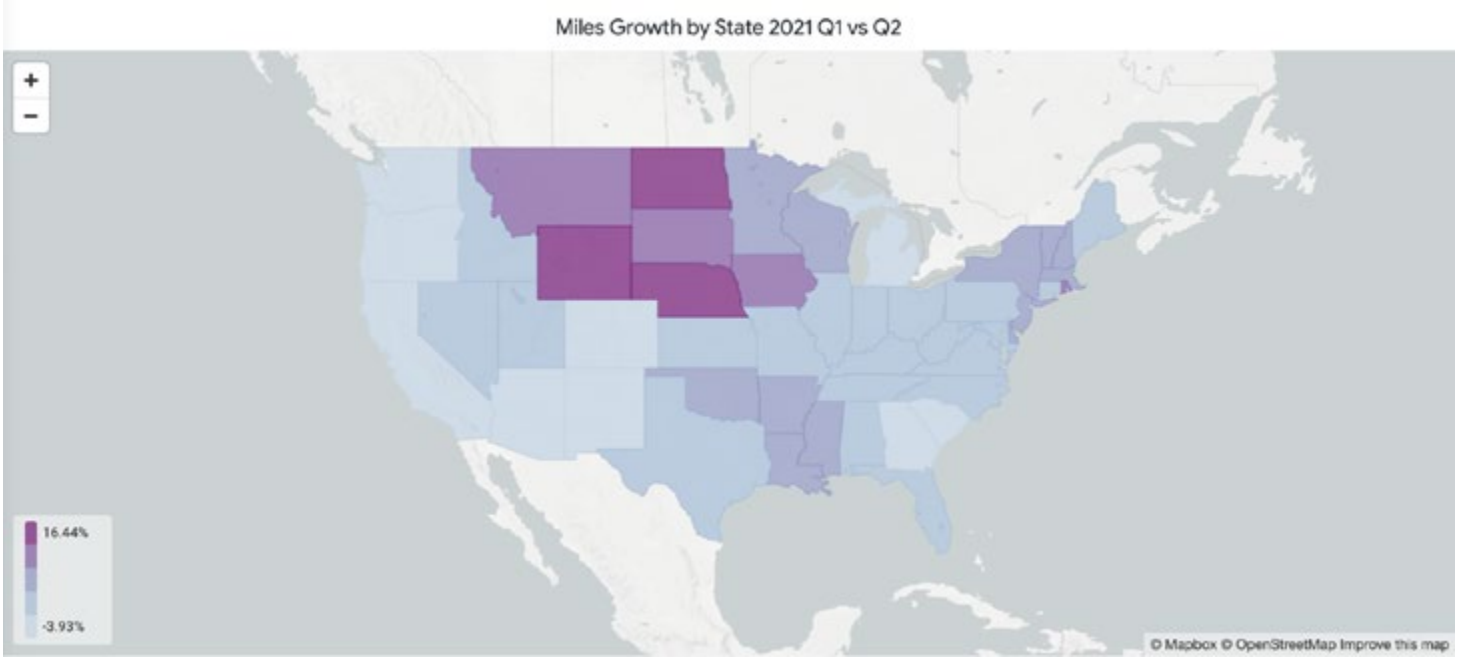
Figure 2: **Long Haul Percent of Total Miles With a Load**



The long-haul percentages in Figure 2 compare miles traveled with loads against empty miles — those traveled without cargo. There is a slow dip in late winter 2021, with a subtle rise between March and April. The percentage has since evened and remains steady. The slight drop reflects more empty miles traveled, while the rise reflects an increase of load miles. Still, the percentage is not where it was in December 2020, indicating an overall decrease in long-haul miles with loads.

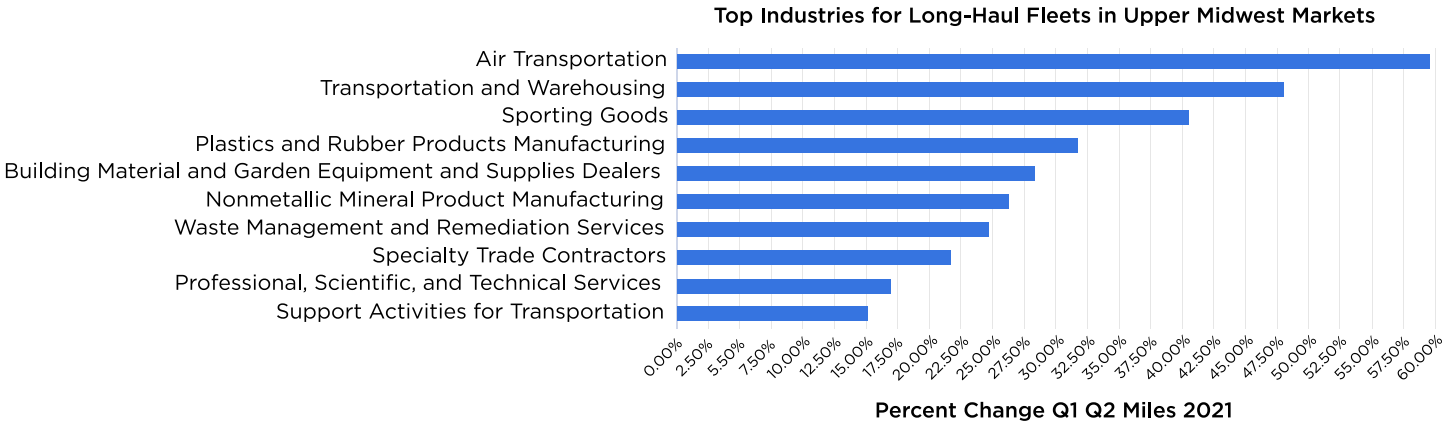
Figure 3a: **2021 Miles Growth by State, Q1 vs. Q2**

Includes approximately 100 long haul carriers.



Positive and negative growth heavily varied throughout the U.S. between winter and spring 2021. The upper Midwest witnessed substantial long-haul growth in spring 2021.

Figure 3b: **Top Industries for Long-Haul Fleets in Upper Midwest Markets**

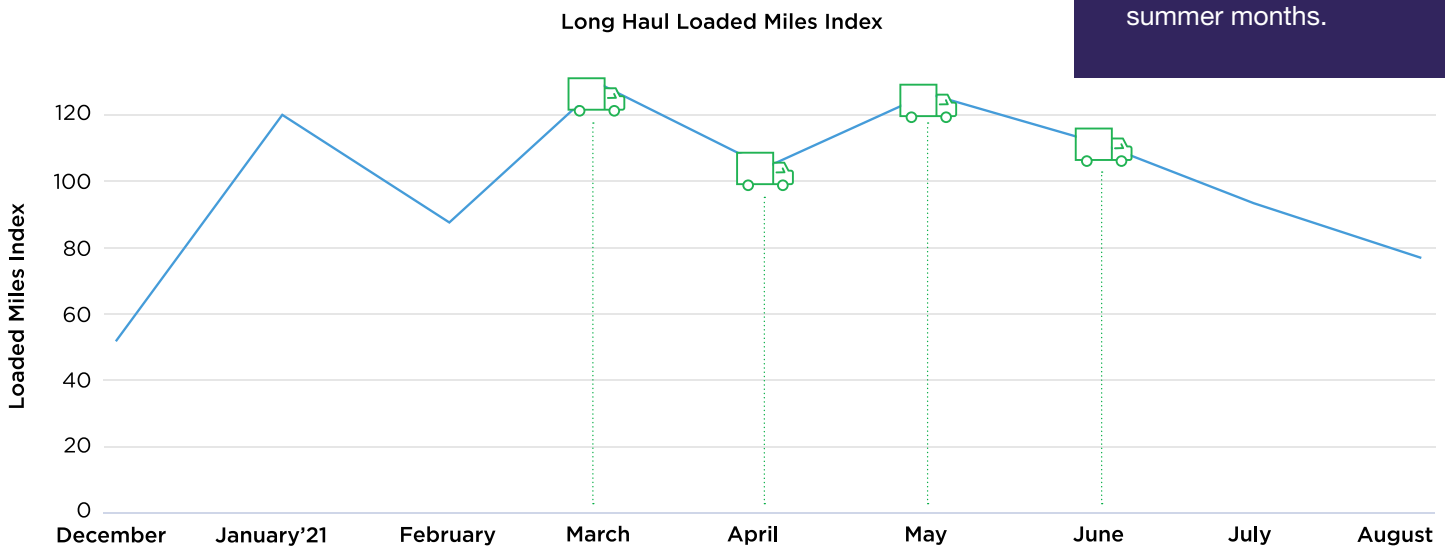


An additional breakdown of upper Midwest miles by sector indicates transportation activity increased in granular and specific sectors, including sporting goods and building materials.

Figure 4: **Long Haul Loaded Miles Index**

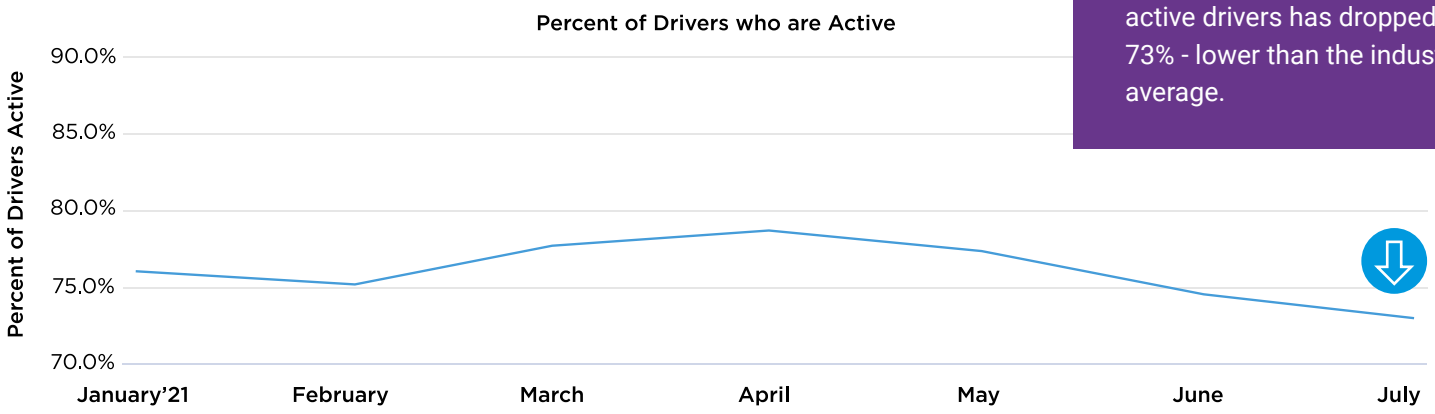
Includes approximately 100 long haul carriers.

While steady through most of early 2021, miles traveled by long haul vehicles dip in the summer months.



Loaded miles pertain to periods when commercial vehicles are operating with loads. Figure 4 represents over 100 long-haul carriers. Fluctuations were most tumultuous in winter 2021, eventually steadying somewhat in the spring. As of May 2021, the loaded miles index appears to be shifting downward, although the downward trajectory has not reached the minimum index from December.

Figure 5: **Percent of Active Drivers**



In July 2021, the rate of active drivers has dropped to 73% - lower than the industry average.

Circling back to the U.S. DOT's emphasis on alarming driver turnover rates, our figure on the percentage of active drivers aligns closely with government findings. Between February and April, the percentage steadily increased near the low 80s. Since April, we can see the rate of active drivers has steadily dropped, reaching the low 70s as of July, which is even lower than the slow season that follows the winter holidays.

Last-Mile Transportation Activity

"In the coming months and years, fleet services will only continue to grow in importance as the demand for faster, more reliable deliveries increases."

Dr. Ashim Bose,
Chief Data and AI Officer at Omnitracs

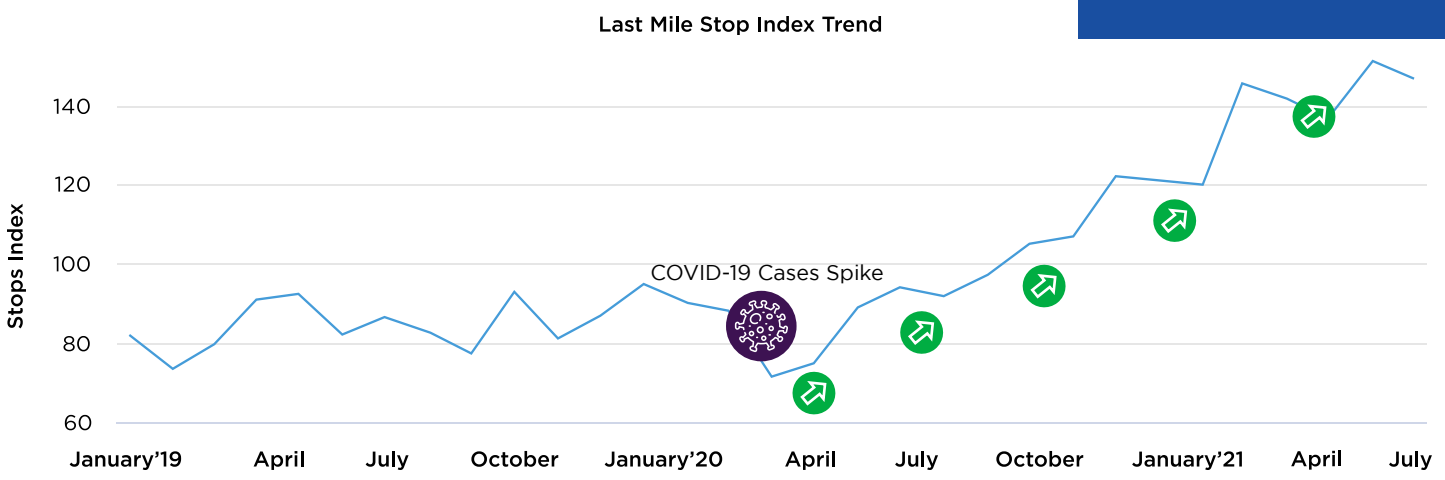
If there's one sector that witnessed holistic booming business during the first year of the pandemic, it was the last-mile industry. The World Economic Forum reported a 25% rise in consumer e-commerce deliveries in 2020. This significant annual percentage increase indicates a massive transformation in consumer buying habits. In 2021, that increased demand continues to skyrocket — and even that is an understatement.

It turns out people really love the convenience of home deliveries, and that affinity for click-and-pay shopping is best reflected in our last-mile findings.

Figures 7, 8, and 9 compare total Omnitracs customer stops in specific sectors with the sales index for each sector. The sales index is pulled from the U.S. Census Bureau. The number of customer stops in each of the sectors continues to be a strong predictor of sales.

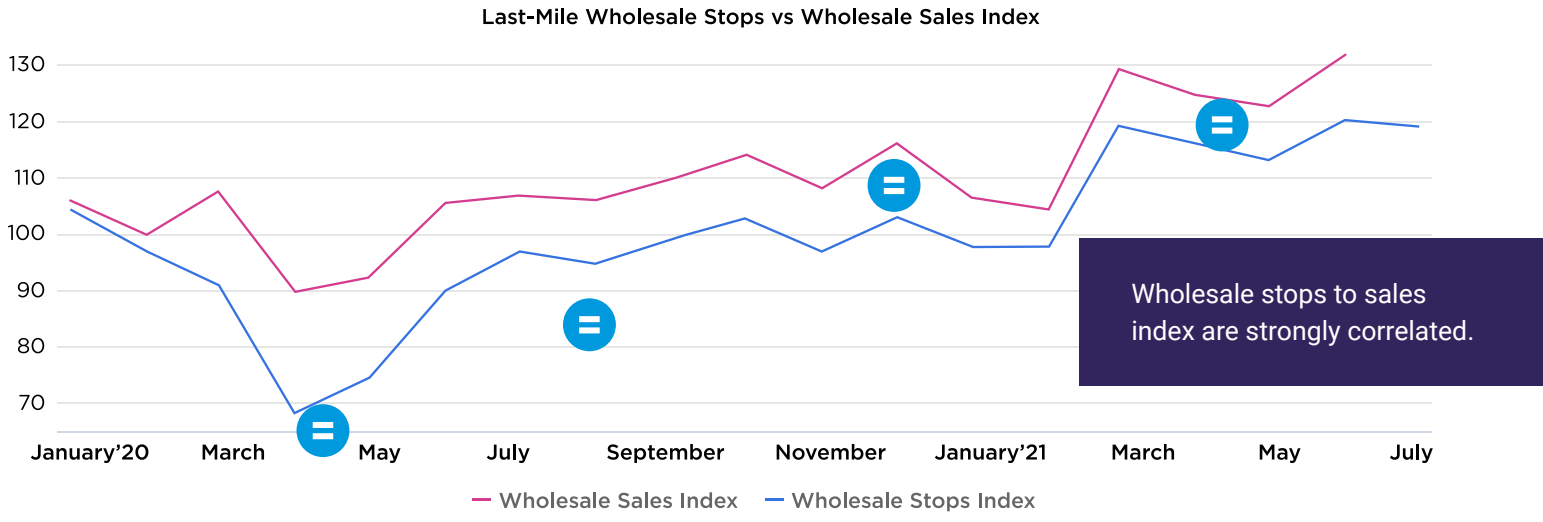
Figure 6: **Last Mile Stop Index Trend**

Last Mile stops increased 99% from April 2020-April 2021.



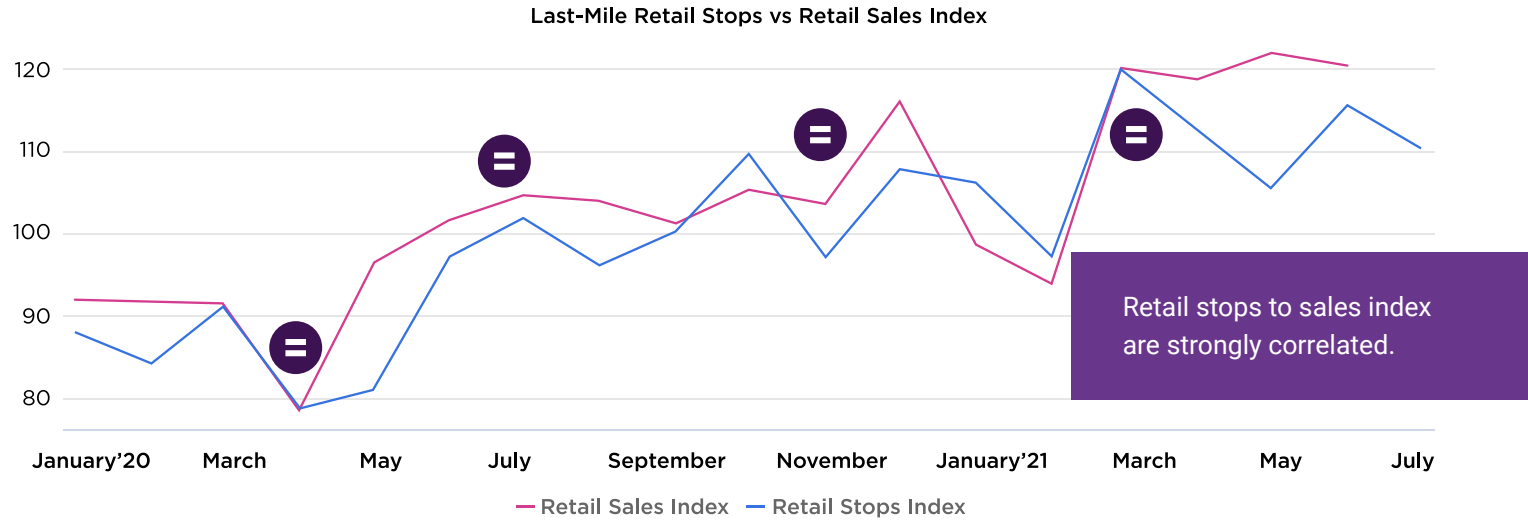
Like the long-haul sector, the last-mile sector experienced consistent supply-and-demand fluctuations aligning with monthly consumer shopping habits in the year leading up to the emergence of COVID-19. Before the pandemic, it was evident that many consumers did not rely on last-mile delivery as much as they do today. In spring 2020, which marked the start of the pandemic, we see these consumer behaviors begin to transform, rising for the next year and a half with no immediate steady season apparent. Last Mile Stop Index represents the percentage over/under the average number of stops for the survey period (Jan19-Jul21).

Figure 7: **Last-Mile Wholesale Stops vs. Wholesale Sales Index**



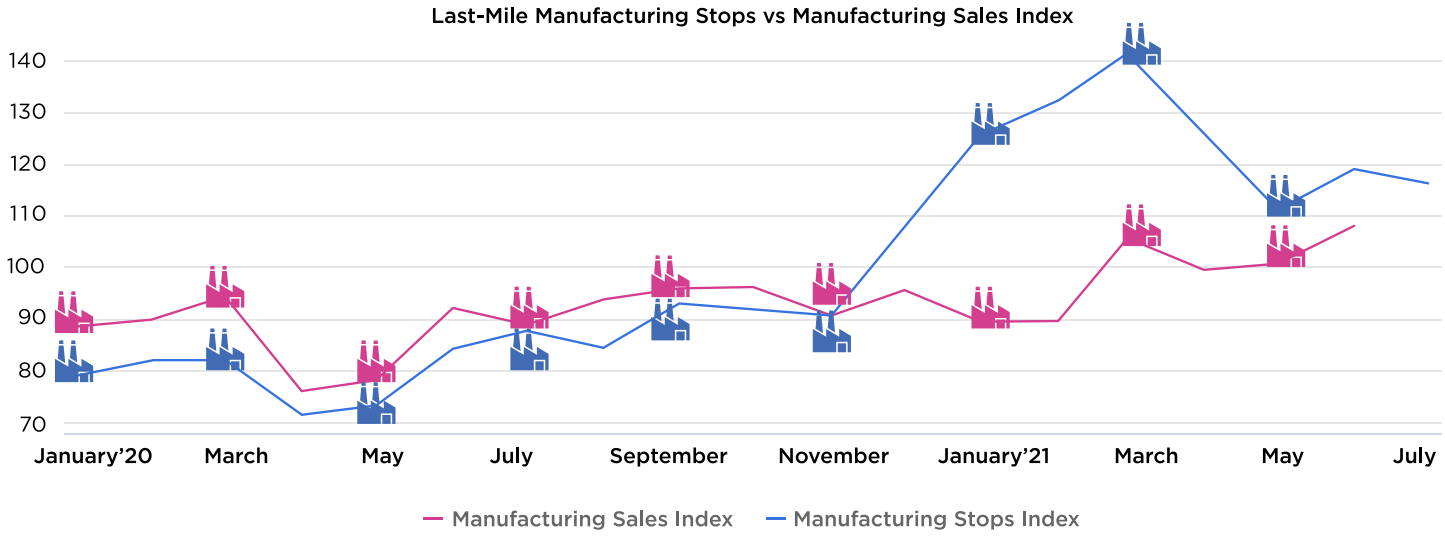
Wholesale stops in Figure 7 reflect the average number of Omnitracs-customer stops in the wholesale sector. We compared customer stops with the wholesale sales index, which represents industry sales. As evidenced, the trends strongly correlate.

Figure 8: **Last-Mile Retail Stops vs. Retail Sales Index**



The retail sales index, which reflects industry sales in the retail market, aligns with the Omnitracs retail stops index. Our customers and other industry carriers underwent somewhat steady fluctuations and have not reached anywhere near the numbers reflected at the pandemic's beginning.

Figure 9: **Last-Mile Manufacturing Stops vs. Manufacturing Sales Index**



Interestingly, the industry's manufacturing sales index indicates overall manufacturing activity was steady, apart from somewhat modest dips during the beginning of the pandemic and at the start of the year during the post-holiday season shopping lull.

Omnitracs customers, on the other hand, experienced a massive spike in retail manufacturing stops from fall 2020 through spring 2021. The spike began slowly trickling down during spring 2021, and it appears to be realigning with the industry's sales index. This spike away from the sales index indicates that although sales and stops often correlate, specific customers may have substantial variations depending on their customer base.

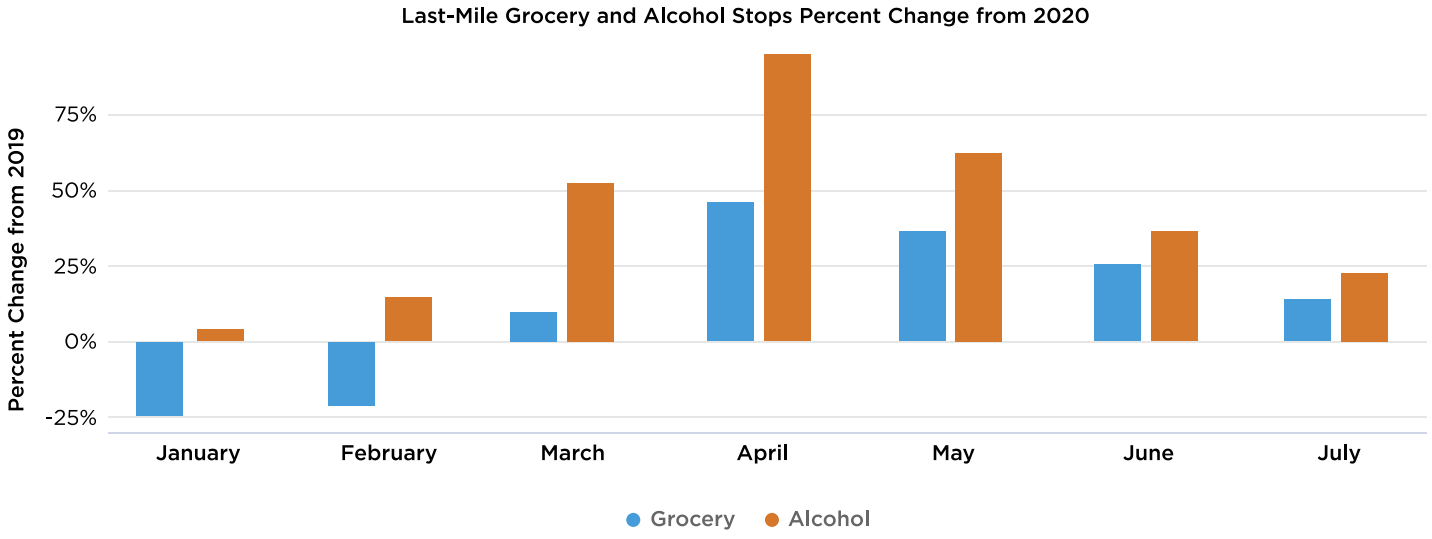
Figure 10: **Wood and Apparel Manufacturing Deliveries**

Manufacturing for Wood and Apparel Manufacturers peak in March for DIY projects during COVID.

Omnitracs data scientists dug deeper to identify the possible reasoning for the abrupt spike in manufacturing stops for Omnitracs customers. Two potential indicators could be an increase in wood and apparel manufacturing, which is reflected in Figure 10.

Lumber prices took off in late winter and early spring of this year due to the pandemic. Many people have undertaken DIY projects during the pandemic. Initially, the industry was shedding its workforce when demand rose substantially, causing businesses to fall behind. After catching up, these companies began meeting high demand needs. Importantly, wood products and apparel are only two isolated components in manufacturing. There are likely other additional indicators behind the rampant rise.

Figure 11: **Last-Mile Grocery and Alcohol Stops Percent Change From 2020**

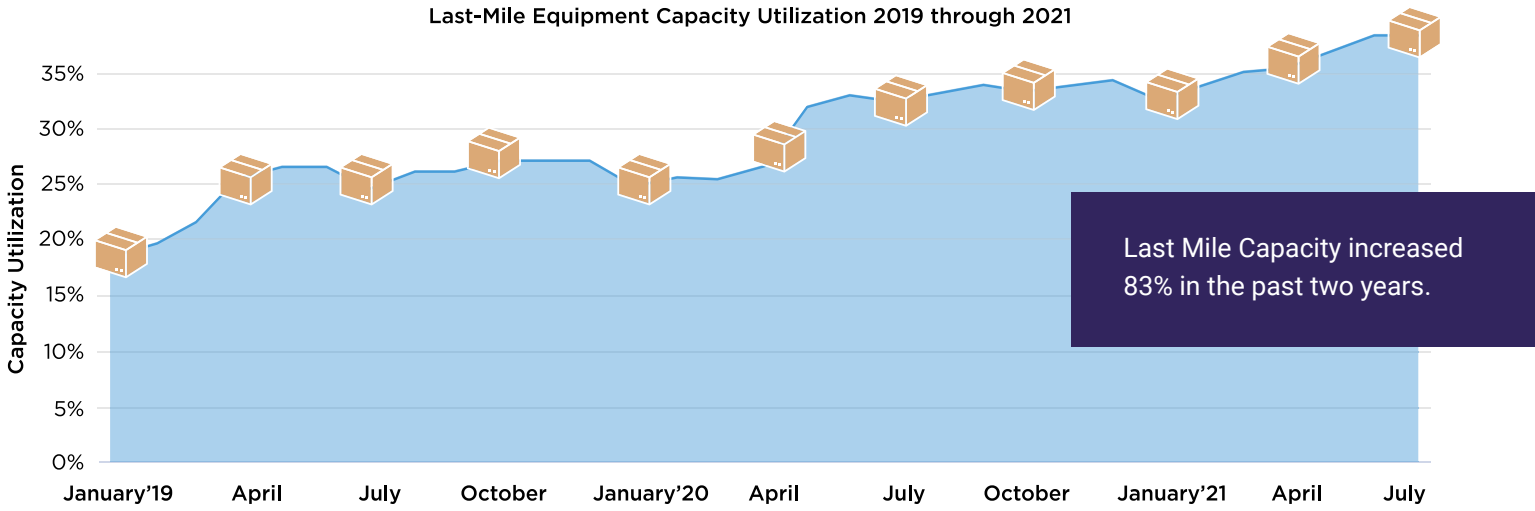


Another surprising last-mile finding is the percentage increase for grocery and alcohol stops in 2021. Alcohol continues to outgrow groceries. In 2020, we noted the pandemic-induced growth of alcohol stops. In 2021, that trend continues to heighten.

The masses flooded grocery and alcohol stores in 2020, so a natural decline was expected. That decline is reflected for grocery stops in January and February 2021. Although they have since begun tapering down, stops rapidly increased in March, April, and May 2021.

A possible cause is people who panic-purchased were equipped with long-lasting grocery items, including cleaning supplies and paper products, through early 2021. Then, shopping habits steadily increased as people became vaccinated and began frequenting stores more.

Figure 12: **Last-Mile Equipment Capacity Utilization, 2019-2021**



Total capacity utilization, which equates to how full trucks are when they depart the depot, is increasing; although, our findings indicate stops per vehicle are decreasing. This likely means customers have more loads to deliver at each stop, thereby making fewer stops per route.

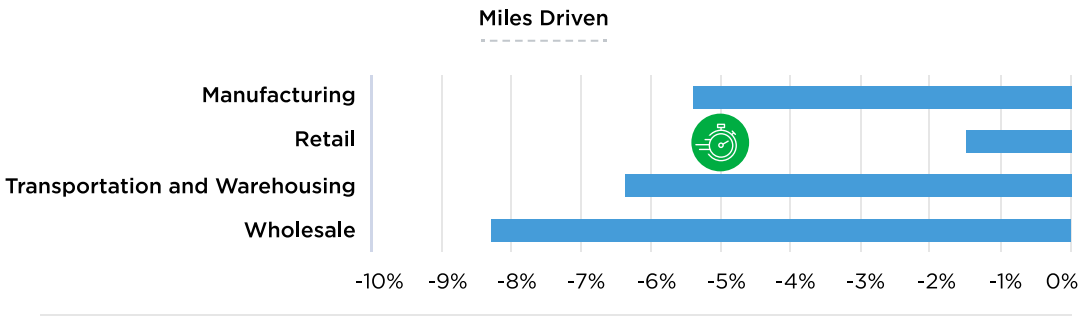
Given that last-mile activity continues to rise substantially, this isn't surprising. Fleets are likely dealing with increased capacity demand from customers and have had to shift daily loads to cater to fewer customers and heavier loads per day.

Identifying the Impact of Seaports on Trucking Activity

The ocean, land, and sky are all home to three facets of the world's transportation. When the Suez Canal crisis hit the global news waves in March 2021, all eyes were on that massive ship — a tiny spec in the Mediterranean Sea — lodged in the Suez Canal. It took about a week to dislodge the vessel and resume business.

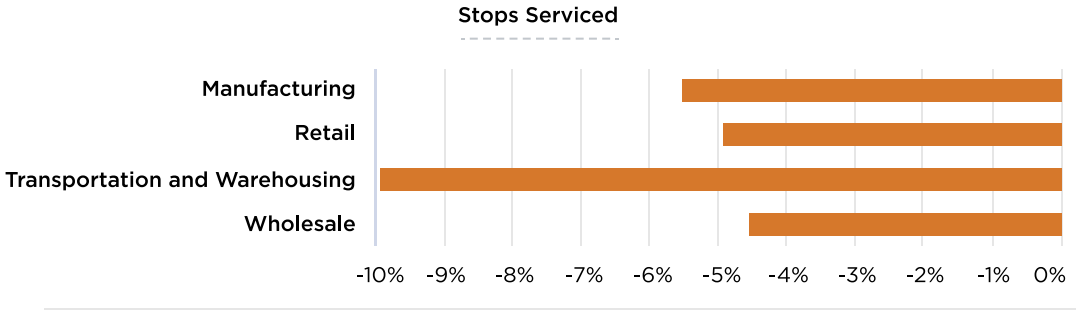
Omnitracs data specialists concluded that the crisis thousands and thousands of miles away had negative ramifications on U.S. transportation activity. Driver miles and customer stops both decreased due to delays in shipping.

Figure 13: **Miles Driven in the Aftermath of the Suez Canal Crisis / March 16 through April 12, 2021**



On average, there's a 5% decrease of miles driven due to delays in shipping from the Suez Canal Crisis.

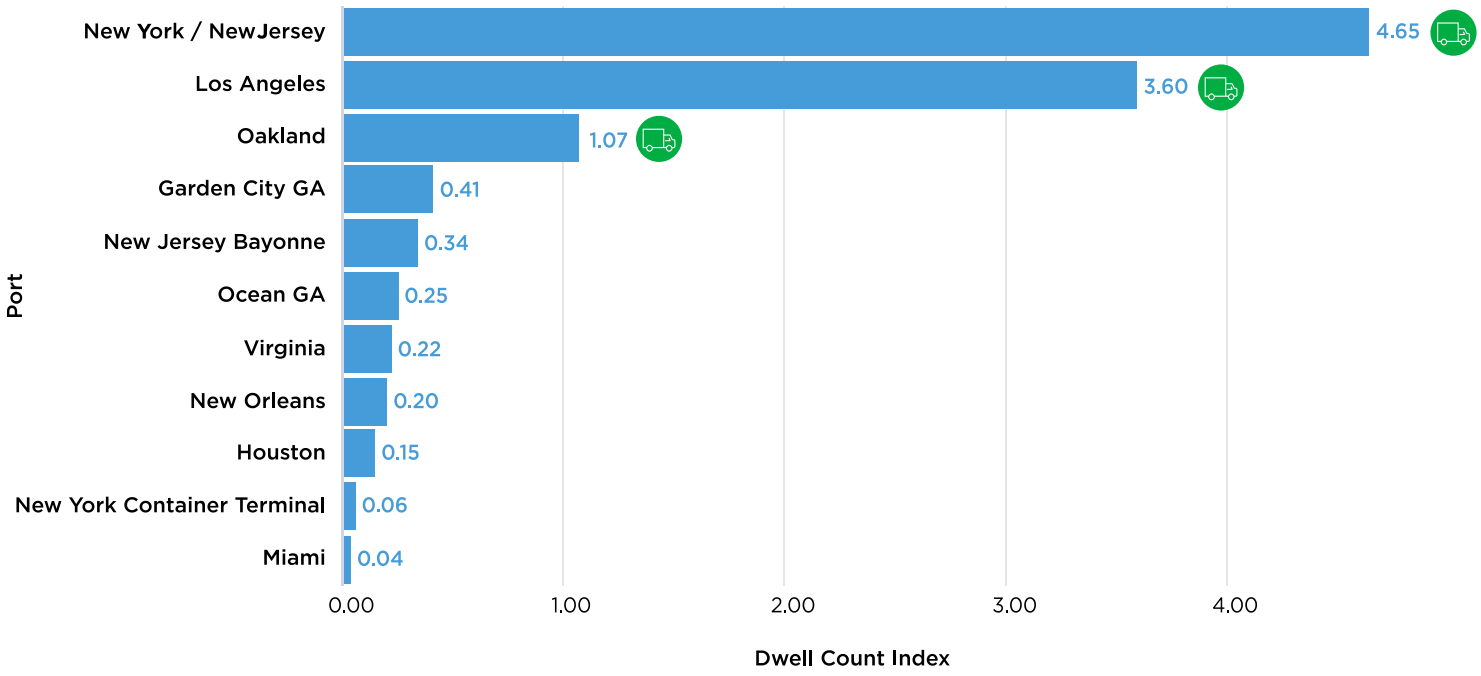
Figure 14: **Stops Serviced in the Aftermath of the Suez Canal Crisis / March 16 through April 12, 2021**



On average, there's a 6% decrease of stops due to delays in shipping from the Suez Canal Crisis.

That crisis served as a loose inspiration for our data analysis on seaport activity and its impact on trucking and transportation. Read on to understand how seaports affect trucking activity and driver timetables.

Figure 15: **Top Dwell Count by Port / Nov 2020 - May 2021**



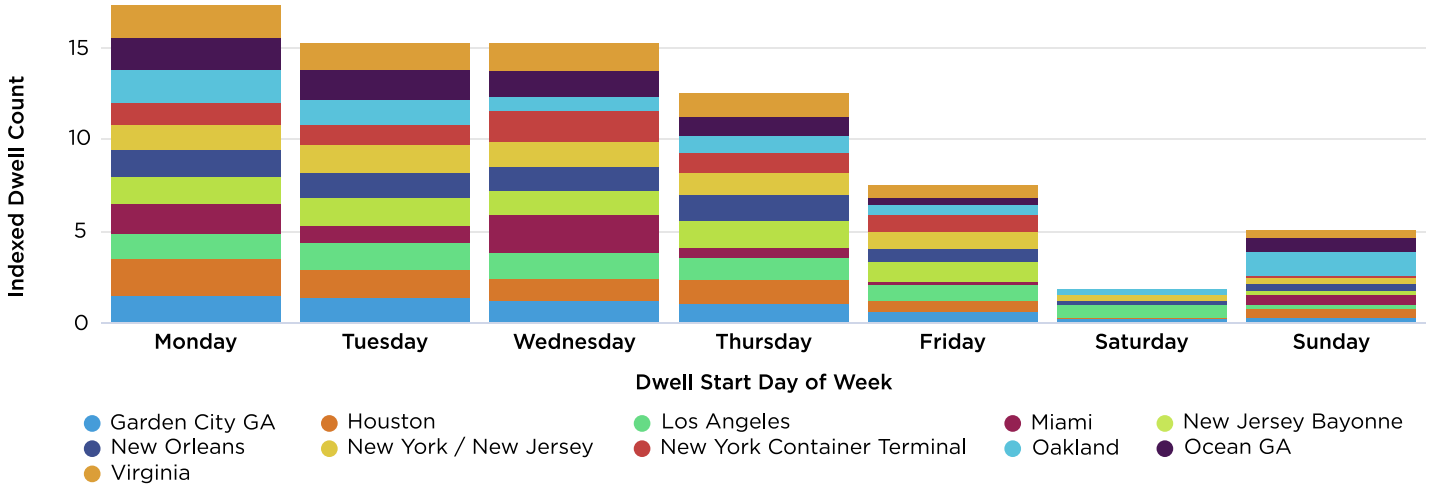
A dwell is registered when a truck has not moved more than 100 meters for a certain amount of time. In the context of our analysis, the minimum dwell threshold is one hour. The total trucks reflected in this graph are trucks that dwell in the country's top ports. The most frequently visited port is the combined port for New York and New Jersey. The combined Los Angeles and Long Beach port is a close runner-up.

Trucks dwelling in these ports are waiting ample time to have containers loaded. This halt in daily activity likely has whirling ramifications for the rest of the day's stops. It may even impact driver compliance, should a professional driver find themselves stuck in a dwell toward the end of their workday.

Figure 16: **Post-Port Dwells / Jan 1, 2021 - Feb 15, 2021**

Figure 16 shows the stop locations of trucks after visiting ports. The trucks frequenting Oakland's port and the New York and New Jersey port have the most inland spread. The inland spread reflects vehicles traveling long distances and possibly making frequent stops.

Figure 17: **Stops by Days of the Week (Indexed and Stacked) / Jan 1, 2021 - Feb 15, 2021**



Days of the week impact dwell times crucially. The highest number of vehicles dwell in the country's busiest ports on Monday. During the rest of the week, Tuesday, Wednesday, and Thursday are not far behind Monday activity metrics. Friday and Sunday offer more modest dwell stop counts, while Saturday remains the quietest day by far.

Leading Safety Insights

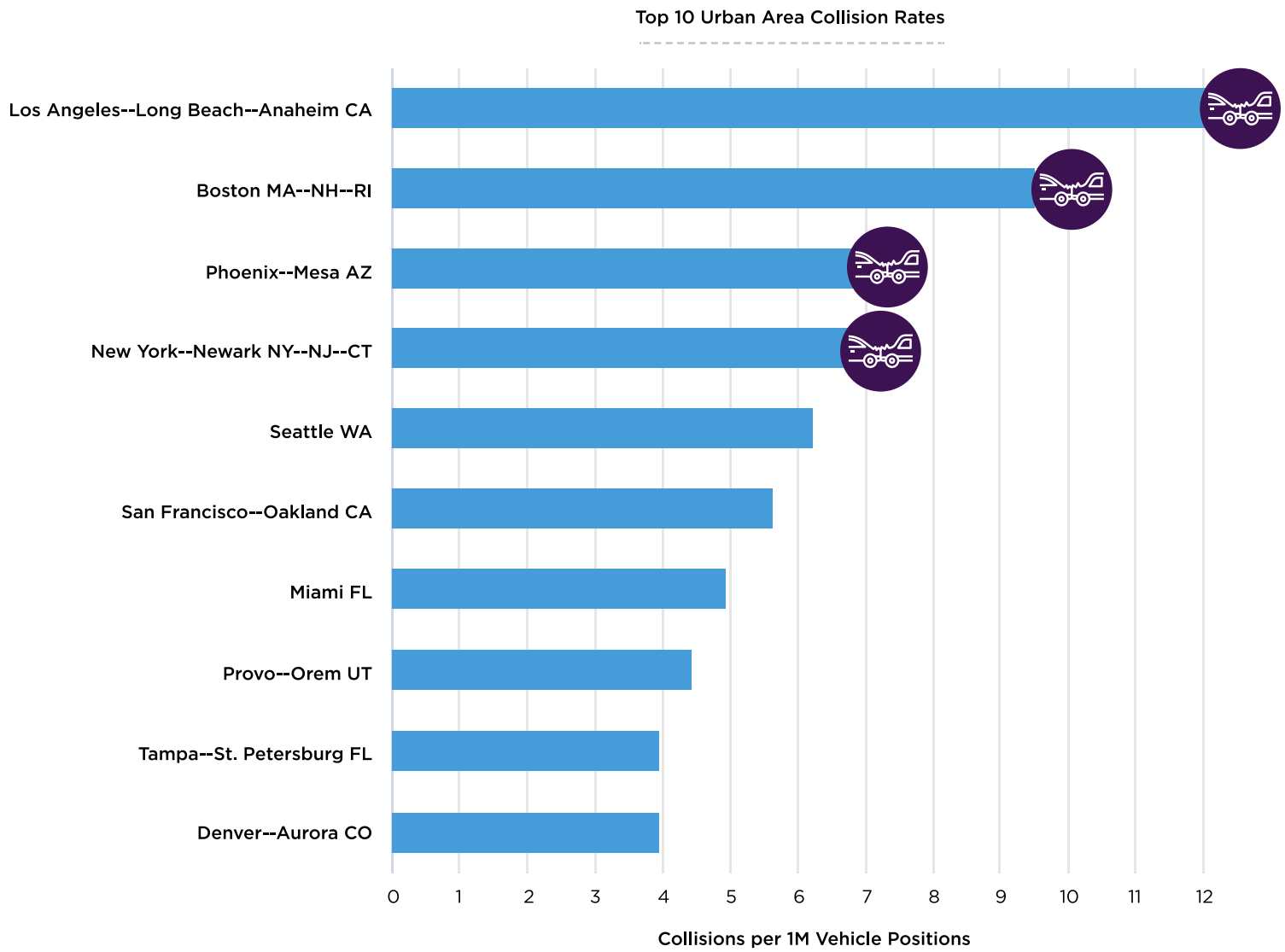
The concept of a well-rounded fleet safety culture has gained significant traction in recent years.

Professional drivers, particularly drivers operating commercial motor vehicles, have been historically blamed for hazardous collisions. With the emergence of intelligent video safety solutions, fleet leaders now have the technology tools they need to protect their drivers in an age of rising litigation and nuclear verdicts.

At Omnitracs, we hold efficient video safety solutions in the highest regard because we know how critical they are to saving driver lives and protecting customer reputations.

A critical component in our commitment involves the dedicated work of our data scientists, who diligently monitor safety trends for the benefit of our customers and the safety of drivers everywhere. Our safety section comprises a breakdown of some insightful data takeaways in 2021 with a focus on hazardous locations and collision zones.

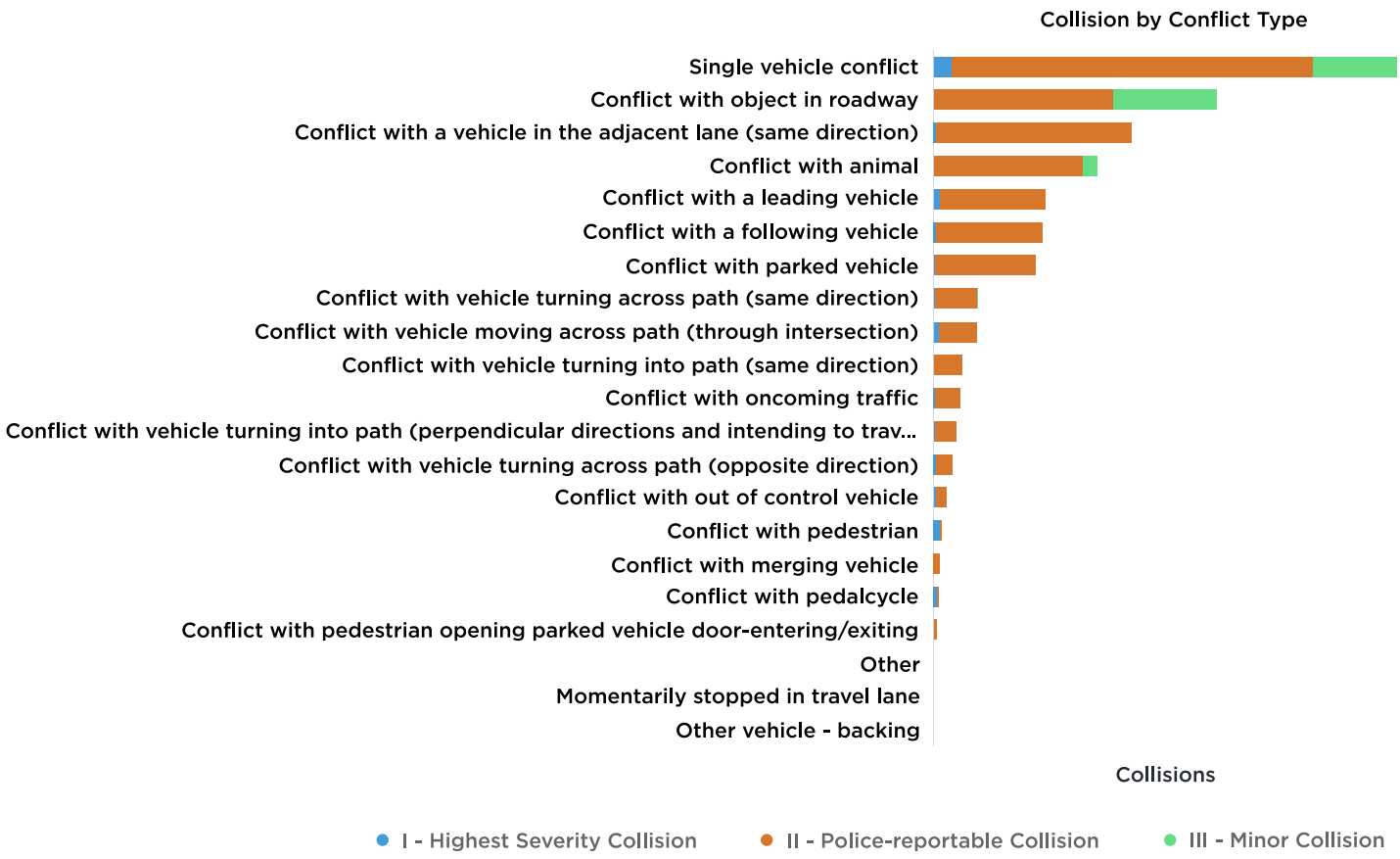
Figure 18: **Top 10 Urban Area Collision Rates / January 2016 - March 2021**



The urban areas with the highest risk rates for collisions are ranked in Figure 18. Class 8 vehicles encompass most of our collisions data; however, various vehicle types are also included, such as buses and taxi cabs. The Los Angeles Metroplex is the top area for collisions per one million vehicles, while Boston, Phoenix, New York City, and Seattle hold the other top spots.

Urban Areas are defined by mapped boundaries according to https://www.census.gov/programs-surveys/geography/guidance/geo-areas/urban-rural/2010-urban-rural.html

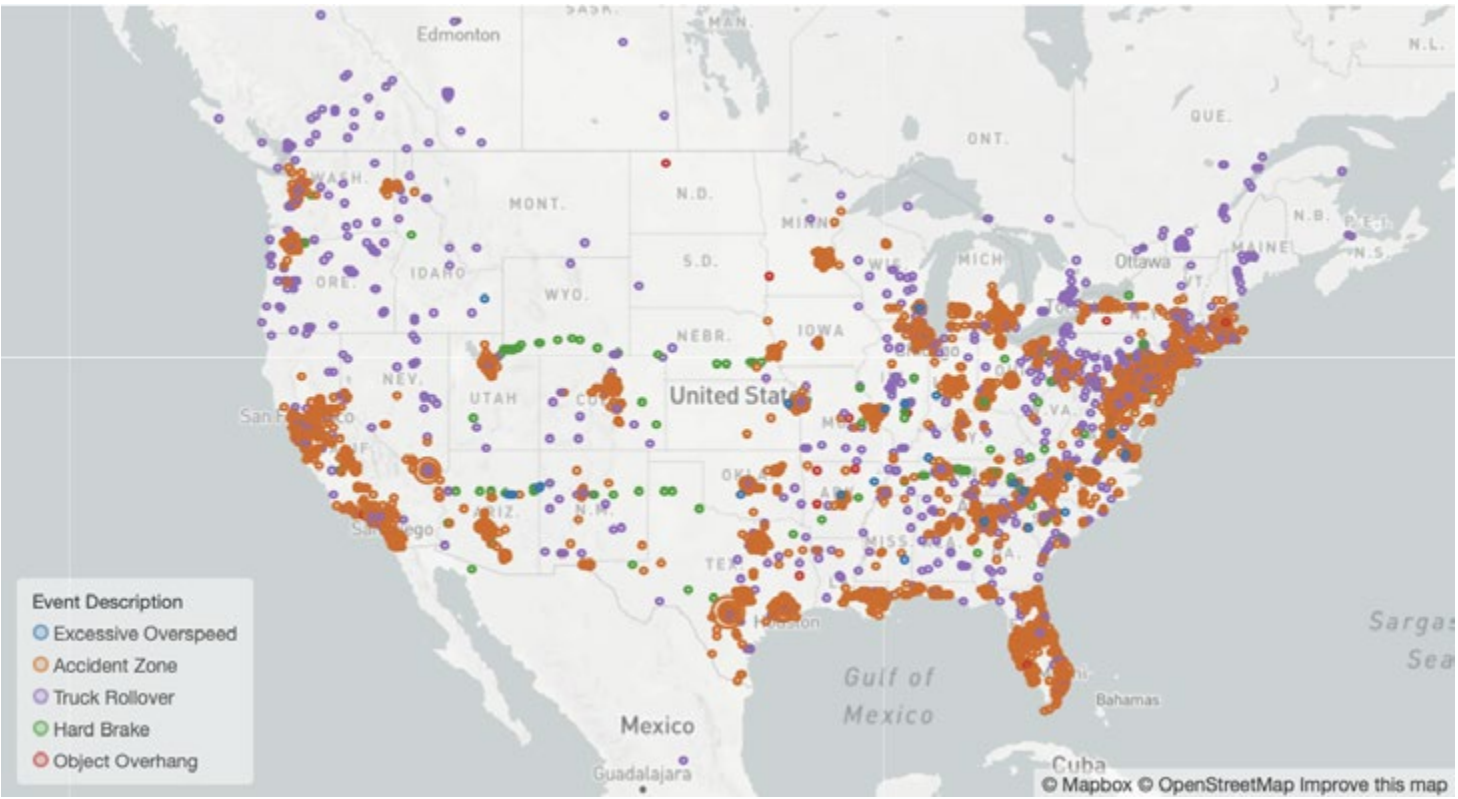
Figure 19: **Collisions by Conflict Type**



Looking at collisions by conflict type, police-reportable collisions lead collision types by a remarkable margin. High-severity collisions are the least common; however, they remain critical, as they have the most impact on driver and roadway safety.

Collisions between two vehicles are the most common, while roadway objects hold the number two spot. Critically, most of these collisions involve other vehicles, with lane collisions holding the number three spot and leading and following vehicle collisions holding spots five and six. Other collision instances, including collisions with animals and pedestrians, are minimally interspersed throughout the chart.

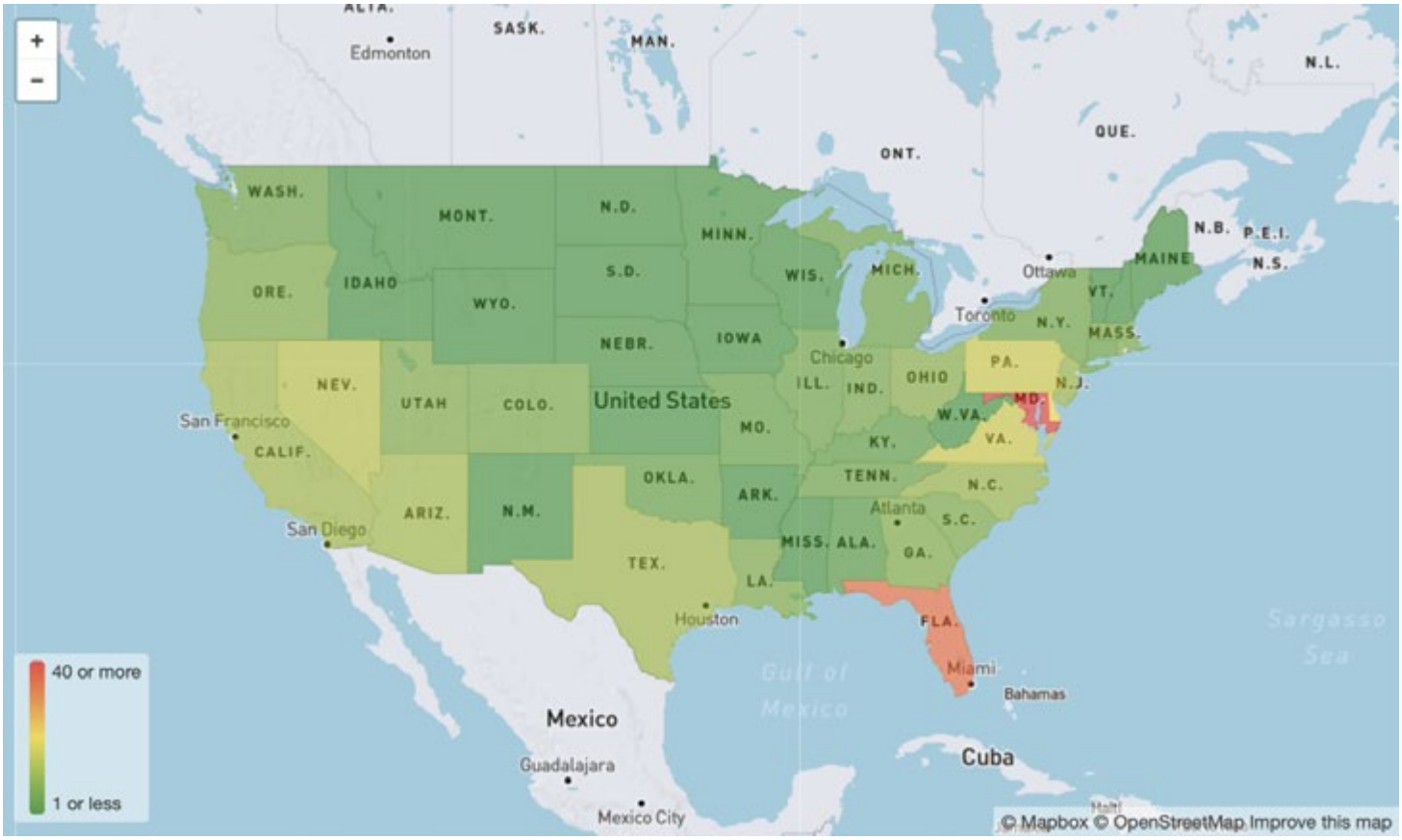
Figure 20: **Hazardous Locations Database / Sep 2020 - Aug 2021**



To define hazardous locations as high-risk areas with increased accidents and critical events, including lane departures and hard braking, Omnitracs data scientists constructed a database with a predictive model and third-party data.

Figure 20 shows a dotted map view of hazardous locations in the United States. Florida, Texas, and parts of the East Coast are home to the most perilous areas for drivers. Drivers operating in or traveling through these areas are at greater risk of collisions or unsafe driving behaviors and must proceed with extreme caution.

Figure 21: **Hazardous Locations per State Road Miles / Sep 2020 - Aug 2021**



Our final representation reflects a heatmap breakdown of the number of hazardous locations per 1,000 state road miles. Omnitracs data scientists used total roadway miles in each state to configure these points and generate accurate location densities.

Maryland has approximately 40 or more hazardous locations per 1,000 state road miles, which further gives credit to the dotted breakdown in Figure 21. This finding is also unsurprising given the state's size and population density. Florida is the second-highest state with hazardous locations per 1,000 state road miles. Additionally, some East Coast states, Nevada, and Colorado are home to higher dangerous location rates.

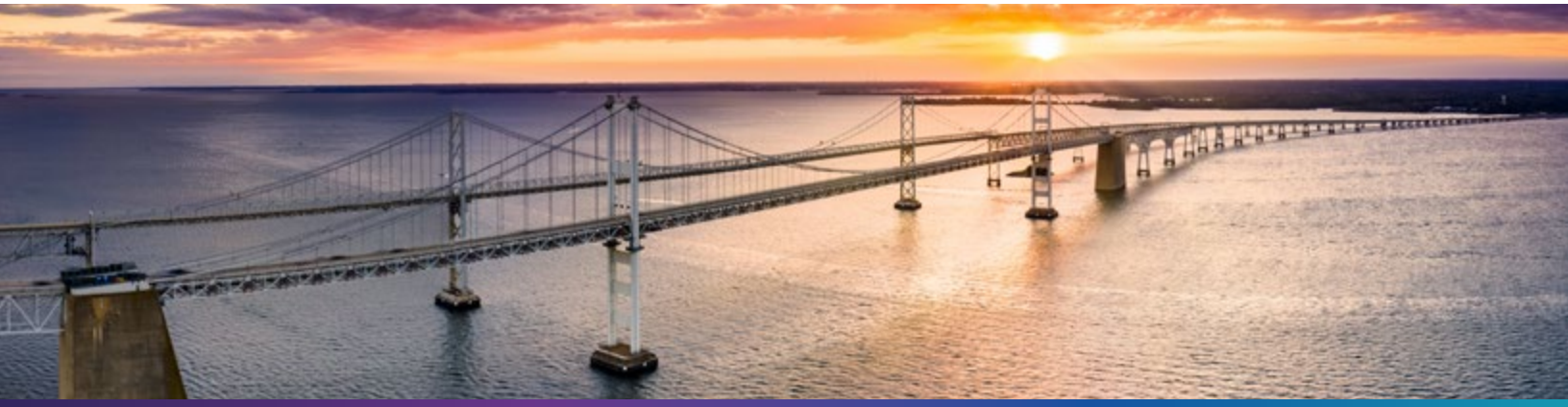


Figure 22: **Baltimore Hazardous Locations**

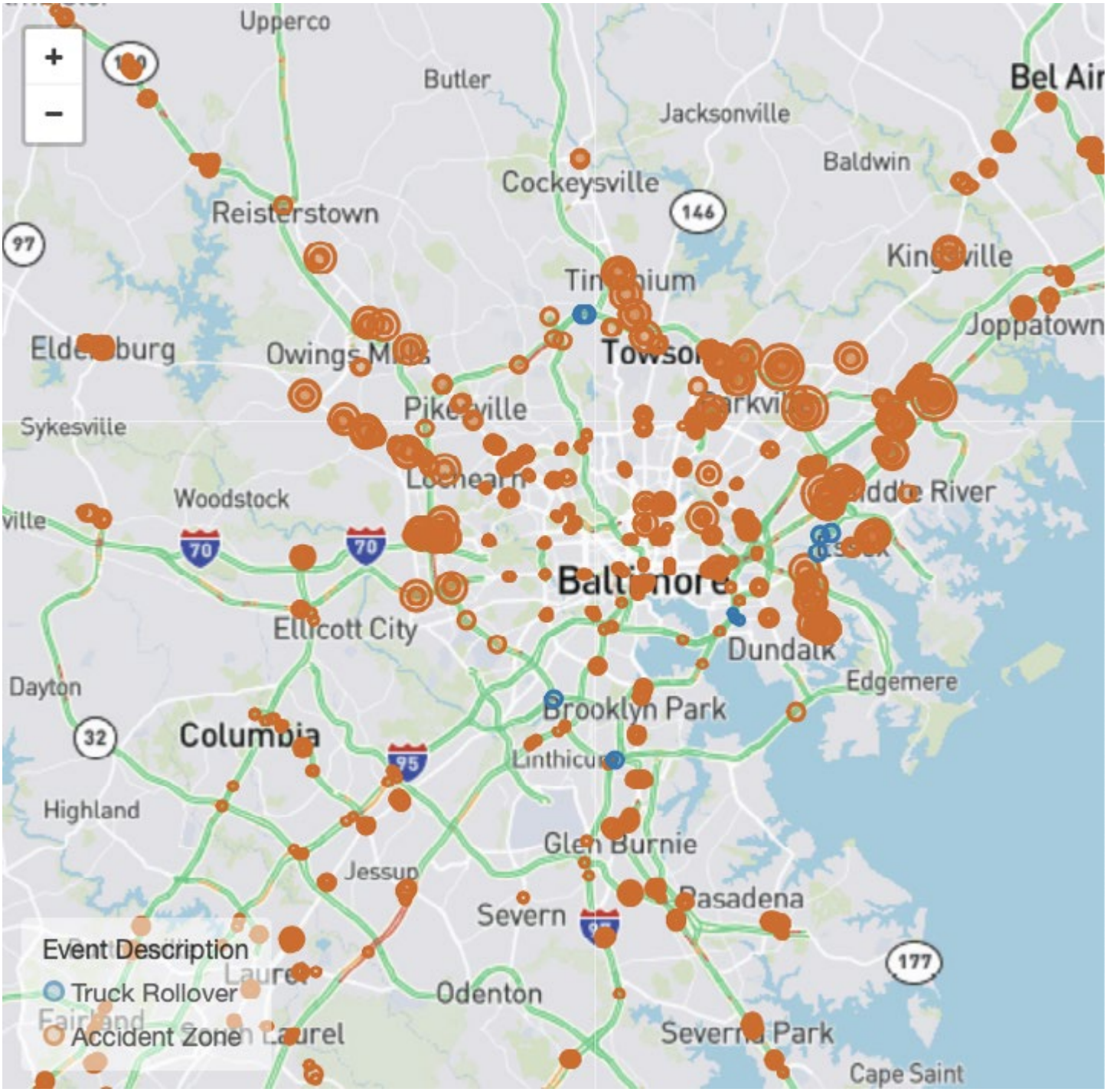


Figure 21 is a dotted map view of Baltimore and surrounding areas in Maryland. Maryland is home to the highest concentration of hazardous locations per individual roadway. Per our data breakdown, the Baltimore area is home to 876 high-risk locations. Most of these locations are accident zones.

Summary

The Omnitracs Industry Intelligence Report: Fall 2021 Edition is the culmination of reliable and leading data insights from Omnitracs, an industry pioneer in fleet intelligence technology. Our commitment to data reflects our focus on the industry.

At Omnitracs, we're not only focused on providing you with leading technology solutions. We want to be with you every step of the way, serving as a portal in an industry with emerging trends metamorphizing in real time.

About Omnitracs, LLC

Omnitracs, a Solera Company, offers the only complete fleet intelligence software platform. Serving the largest for-hire and private fleets in the transportation and distribution industries, Omnitracs' best-in-class solutions accelerate business success, improve efficiency, and enhance the driver experience for nearly 15,000 customers who collectively travel 700 million miles per week. Omnitracs pioneered digital transformation in trucking more than 30 years ago, and today offers a one-stop-shop for enterprise-grade, data-driven solutions across compliance, telematics, workflow, routing, and video safety. Headquartered in Dallas, Omnitracs serves customers in over 50 countries and employs more than 2,000 people worldwide.

For more information visit **omnitracs.com**

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