

Disaster Management

Use connected vehicle data to reduce
liability and risk



azūgaTM
a Bridgestone Company

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Introduction

Whether you believe climate change is a big deal or not, disaster management is serious business. With more weather-related events causing disruptions each year, knowing where your assets – vehicles, employees, and equipment – are can save you thousands of dollars if not more. Non-weather-related events, such as riots, rallies, and other large gatherings, can also cause problems that can be avoided. This whitepaper will discuss the trends facing natural disruptions and recovery as it pertains to fleets.



Natural Disasters

The United States faced record wildfires in 2020, with an expectation that it will be just as bad, if not worse, in the 2021 fire season. This year wildfires are expected to burn 9.5 million acres, over twice as much as the record-breaking 2020 season, according to Mark Puleo from AccuWeather. (Puleo, 2021). With another cruel season ahead, insurance providers can expect a rise in claims and costs. The Insurance Information Institute (III) (2021) shows three of the 2020 wildfires are among the top 10 costliest in history, as shown in Table 1. With the predictions for 2021, the US could see an even more significant impact of wildfires on geographic destruction, residential and commercial wreckage, and death rates, and health implications.

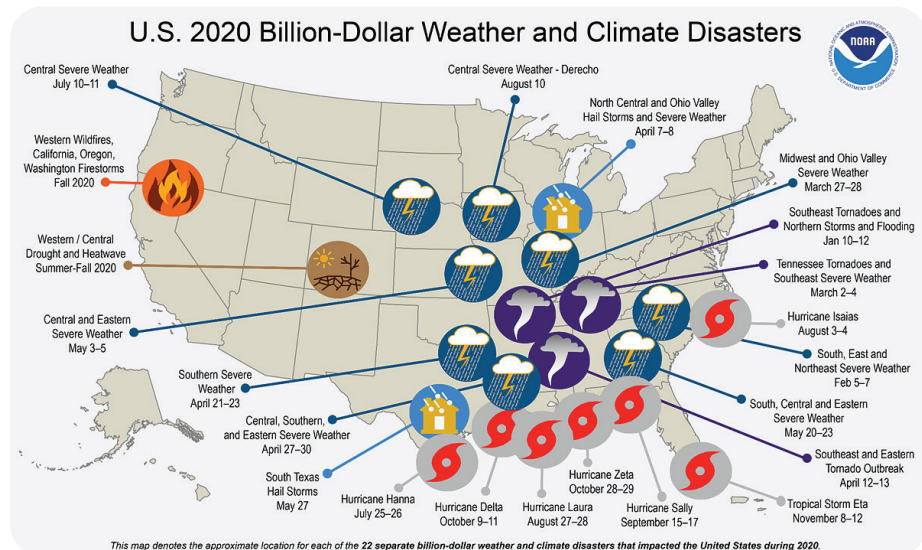
Table1			Estimated insured loss	
Rank	Year	Name	Dollars when occurred (in millions)	In 2020 dollars (2) (in millions)
1	2018	Camp Fire	\$10,000	\$10,380
2	2017	Tubbs Fire	8,700	9,230
3	2018	Woolsey Fire	4,200	4,360
4	1991	Oakland Fire (Tunnel)	1,700	3,240
5	2017	Atlas Fire	3,000	3,180
6	2020	Glass Fire	2,900	2,900
7	2020	CZU Lightning Complex Fire	2,430	2,430
8	2017	Thomas Fire	2,250	2,390
9	2007	Witch Fire	1,600	2,000
10	2020	LNU Lightning Complex Fire	1,980	1,980

(1) Includes losses sustained by private insurers and government-sponsored programs such as the National Flood Insurance Program. Includes events that occurred through 2020. All fires on this list occurred in California. Includes Puerto Rico and the U.S. Virgin Islands. Ranked on losses in 2020 dollars. Subject to change as loss estimates are further developed. As of February 23, 2021.

(2) Adjusted for inflation by Aon using the U.S. Consumer Price Index.

Catastrophic-related events have been on the rise since 1980. According to Insurance & Mobility Solutions (IMS), "Claims costs to licensed vehicles were estimated between \$2.9 to \$4.7 billion for Hurricane Harvey alone." (IMS, 2020). As human impacts and catastrophic natural events continue to rise, costs associated with such events need to be assessed and managed to reduce risk. Using historical, real-time, telematics, and onboard computer data combined with forward-looking algorithms can lead to meaningful insights. While the reduction of speeding events might be evident, it can also be stated there are fewer people on the road. Understanding where vehicles are in a given area at any time can help insurers manage the risk. Notifications and alerts when there is a catastrophic threat evident can lower the cost of disaster recovery, as well as reduce the number of claims filed and the cost to the insurer. Being able to utilize this data to allocate resources to the

most needed areas could help lower injury and mortality in such disastrous events. The data from 2020 alone is staggering. With 22 separate billion-dollar disasters across the United States, the insurance industry took a hard hit. With the prediction for 2021 and beyond to be even worse, there is cause for alarm. The volume of claims and losses is expected to grow. The severity of the natural disaster is directly linked to increases in population and material wealth over the last few decades. (NOAA, 2021). Inland flooding, wildfires, and tropical storms will continue to plague the country.



Economic Implications for Insurers

When a catastrophic event occurs, costs can be unpredictable and correlated across several insured areas, such as floods, hurricanes, or earthquakes. The financial consequences of natural disasters are rising due to population growth and the rising concentration of property assets in vulnerable disaster-prone areas according to Oliver Rohde. (2013). Financial solvency can directly affect how policies are written in disaster-prone areas. Predictive algorithms, artificial

intelligence, and historical data can mitigate risk and lower the cost of natural disasters. Table 2 from III displays the details surrounding different types of natural events, such as storms, hurricanes, and wildfires.

It can be deduced that no matter the severity or duration of a natural catastrophic event, the economics are not in favor of the insurer.

Table2			Event Losses	
	Number of events (1)	Fatalities	Economic (2) (in millions)	Insured (3) (in millions)
Severe convective storm	51	106	\$49,323	\$35,000
Tropical cyclone	12	73	40,059	21,600
Wildfire, drought, heatwave	19	43	\$22,959	\$13,900
Flooding	4	8	5,292	2,200
Winter storm	4	6	\$1,634	\$930
Earthquake	4	0	152	58
Total	94	~250	\$119,000	\$74,000

(1) Natural disasters that cause at least \$25 million in insured losses; or 10 deaths; or 50 people injured; or 2,000 filed claims or homes and structures damaged. Includes Puerto Rico and the U.S. Virgin Islands.

(2) Includes any direct physical damage or direct net loss business interruption costs.

(3) Includes losses sustained by private insurers and government-sponsored programs such as the National Flood Insurance Program. Subject to change as loss estimates are further developed. As of February 23, 2021.

Disaster Management

Coordinating disaster response when communication is limited and multiple municipalities are involved can get complicated. Sharing information across platforms, across agencies, across multiple areas can get cumbersome. Mobikit takes specific and predictive disaster data and turns that into actionable information for insurance carriers.

Insurance providers can use telematics data to help fleets get out of harm's way as well. In the instance of a catastrophic event, providers can instantly provide location details for fleets using telematics and reach

out proactively to move them out of danger. Not only are vehicles saved, but most importantly, human lives are protected from injury or fatality. Asset management also becomes less daunting with a digital live map of all vehicles, stations, and assets during a major event. Setting up aid stations and support around an area is difficult enough when a catastrophic event occurs. Telematics suppliers can offer support in a unique way – helping to oversee company assets instead of taking resources away from boots on the ground.

What to Do with the Data

Take charge of your situation more clearly with geofencing. Platforms, such as Mobikit, enable insurance carriers to immediately identify any connected vehicle in a given geographic area at risk through geofencing. Notify those in harm's way of the impending event to help reduce the risk and claims. Real-time notifications streamline communication strategies and solidify the commitment to safety.

Gain insight and comparison data from all connected vehicles, regardless of telematics provider, for reducing the risk of insured fleets. Create benchmarks for key driver performance metrics, such as hard and harsh braking events, speeding, sudden acceleration, and overall driver score. Summary statistics and detailed trip

Conclusion

Natural disasters and events can wreak havoc on businesses. Insurance companies can foster lower risk in commercial fleets through telematics, data, and an active risk management strategy. Increasing the safety of drivers, vehicles, and assets around the country will lower risk, reduce claims, and benefit both the insured and the insurer. Mobikit SafetyIQ can be the bridge to understanding more about all the connected vehicles on the road under your purview, regardless of telematics providers.

views can be used to build a history of driver behavior prior to and after an event.

Visual risk with data. Identify specific areas with a high likelihood of events. By identifying key areas of incident, insurers can warn fleets to avoid these areas to decrease the number of driving events that may occur. By pinpointing problem areas to avoid, insured fleets can decrease their risk and lower the number of claims submitted.

Deploy insurance carrier resources.

Understanding the potential magnitude of losses can help insurance carriers prepare for claims or more effectively deploy support resources to aid their insureds. While the ideal is to help insureds to safety, quickly aiding them in their time of need is important too.

Mobikit SafetyIQ can predict and prevent losses from:

- ☐ Hail storms
- ☐ Wildfires
- ☐ Earthquakes
- ☐ Tornadoes
- ☐ Hurricanes
- ☐ Flooding
- ☐ Blizzards and ice storms
- ☐ Political rallies
- ☐ Societal unrest

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About Bridgestone

Nashville, Tennessee based Bridgestone Americas Tire Operations is the U.S. subsidiary of Bridgestone Corporation, the world's largest tire and rubber company offering a wide range of Bridgestone, Firestone and associate brand tires, BATO maintains wholesale and original equipment sales operations across a broad line of products, including passenger, light truck, commercial truck and bus, agricultural, motorcycle, kart and off-the-road tires.

Additional US subsidiaries include Bridgestone Retail Operations which operates the largest network of company-owned automotive service providers in the world – nearly 2,200 tire and vehicle service centers across the United States – including Firestone Complete Auto Care, Tires Plus, Wheelworks and Hibdon store locations. Bridgestone authorized dealers consist of independent tire retailers that are authorized to sell and service Bridgestone or Firestone products. BATO's Commercial Solutions Group also has an extensive dealer network that also includes Truck, Bus, Radial Division. In summary the Bridgestone network consists of approximately 5,400 service locations for tire, automotive and fleet solutions.

Below is a complete list of links to our products for Commercial, Retreads and Consumer tires.

Bridgestone Brand

Alenza, Blizzak, DriveGuard, Dueler, Ecopia, Potenza, Turanza
Bridgestone Consumer product

website: <https://www.bridgestonetire.com/>

Bridgestone Commercial product

website: <https://commercial.bridgestone.com/en-us/index>

Firestone Brand

All season, Champion, Destination, Firehawk, Transforce, WeatherGrip, Winterforce

Firestone Consumer product

website: <https://www.firestonetire.com/>

Firestone Commercial product

website: <https://commercial.firestone.com/en-us/index>

Bandag Retread

website: <https://www.bandag.com/en-us/index>

About Azuga

Azuga, a Bridgestone company, is a leading global connected vehicle platform, helping our customers turn data about vehicles and their use into intelligence that improves operations and safety while reducing costs and risk. Azuga provides reliable end-to-end solutions for commercial fleets, government agencies, insurance companies and automotive industry suppliers, encompassing hardware, the Azuga One platform, award-winning fleet applications and data analytics. Azuga is headquartered in Fremont, California.

Our award-winning Azuga Fleet solution is used by thousands of customers—from the small fleet of one or a few vehicles up to several thousand—and is lauded by our customers for its ease-of-use, robust features and affordable pricing.

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