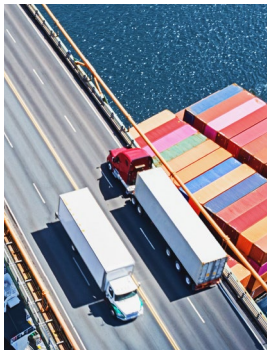
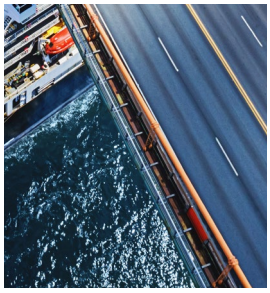
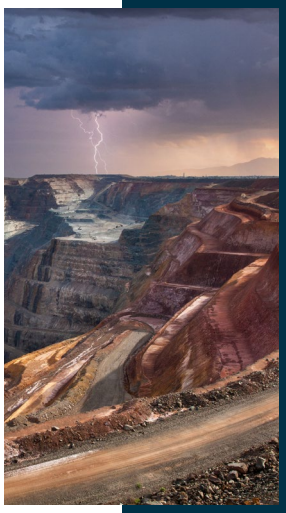
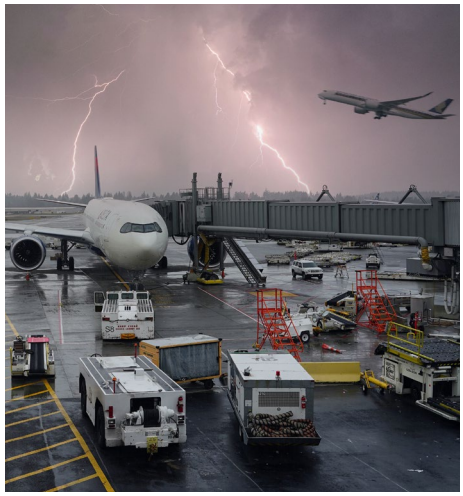
Commercial Applications Guide









aem

Contents

Introduction ... 01

Service area 1: Severe weather risk management ... 02

Service area 2: Flood risk management ... 03

Service area 3: Wildfire risk management ... 04

Focus industry: Agriculture ... 05

Focus industry: Aviation ... 05

Focus industry: Mining ... 06

Focus industry: Professional sports & private clubs ... 06

Focus industry: Power utilities ... 07

Focus industry: Shipping & transportation ... 07

Focus industry: Construction ... 08

Focus industry: Insurance and financial services ... 08

Ready to work with a business-minded weather expert? ... 09

Related resources ... 10

Introduction

At AEM, our purpose is to empower communities and organizations to survive – and thrive – in the face of escalating environmental risks. That means helping businesses of every scale and type understand incoming weather risks so they can lead decisively and create positive outcomes for their financial and community stakeholders.

We're extremely proud to have established a reputation as a go-to advisor and support system for future-facing businesses who realize profits and reputation will be made or lost in the near future based on daily decisions around weather. Our weather services and monitoring solutions help businesses find the ideal balance point between safety and continuity. We make it easy for operational leaders, ground-level workers, and their end customers to understand when it is and isn't safe to do business and when it's safe to resume normal routines.

This guide is designed to illustrate how we help commercial sector businesses increase weather-readiness by aligning services from our portfolio of brands with growing daily challenges.

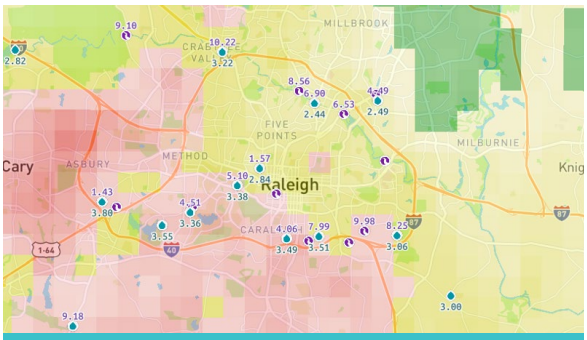
If you have any questions about the content of this guide or what solutions to your weather challenges might look like, you can **contact us to talk with a weather specialist**.

Service area 1: Severe weather risk management

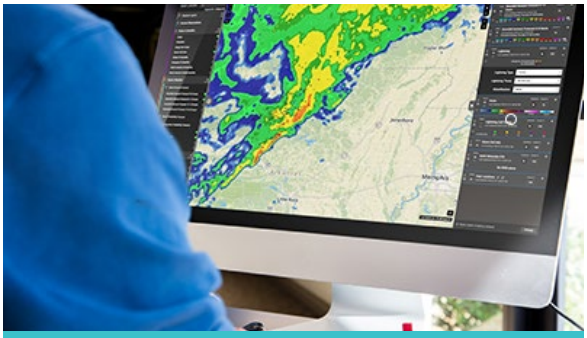
Operational decisions involving weather are increasingly where businesses either save or lose money, regardless of industry. Whether you're operating brick-and-mortar locations, deploying a fleet of highly trained service professionals, or just trying to make sure the corn grows, aligning your team's work with the current and incoming weather is key to making the best use of time and avoiding situations where Mother Nature could harm your bottom line or reputation.

Given those increasing challenges, a growing number of commercial businesses are turning to AEM to provide a combination of hardware, software, and consultative services to increase their severe weather resilience. The breadth of our services goes beyond what we could fit on one page, but generally speaking, our offerings for businesses come down to four key themes:

Core solutions

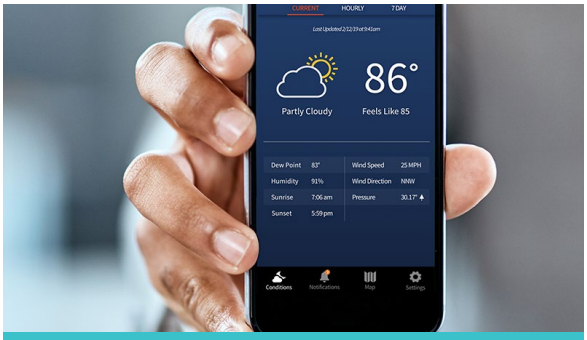


Rainfall forecasting



Storm tracking

Lightning detection



Weather alerts

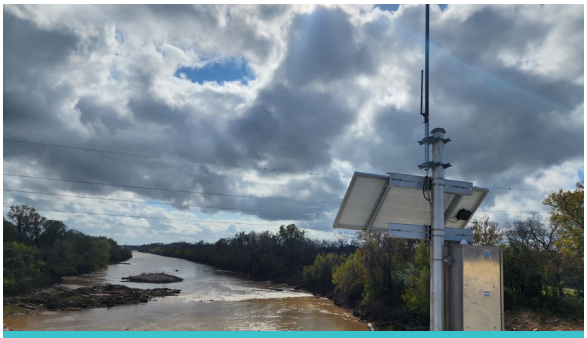
Service area 2:
Flood risk management

Over the last ten years, there have been 18 individual billion-dollar flooding events in the United States alone, with a total combined impact of $66.1 billion. Both numbers represent double the totals from the prior ten-year period. Make no mistake, flooding is one of the biggest growing threats to economic continuity.

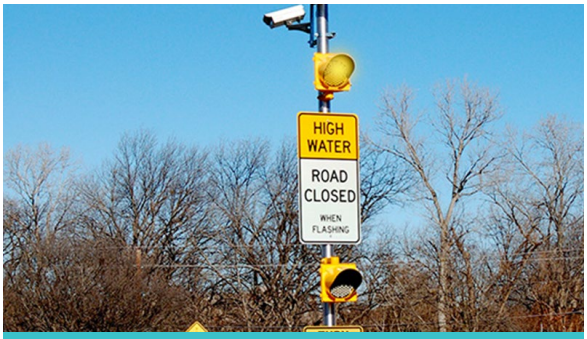
While protecting area citizens from the direct impact of floods is largely a public responsibility, it falls to area businesses to maximize economic resilience to provide the community with as much normalcy as possible leading up to, during, and following a flood event. That means having the most possible advanced notice, receiving accurate updates as a potentially flooding storm approaches, and getting alerts that clarify when it's time to pivot toward prioritizing employee safety and when to resume operations as normal. To that end, we offer services around:

Core solutions

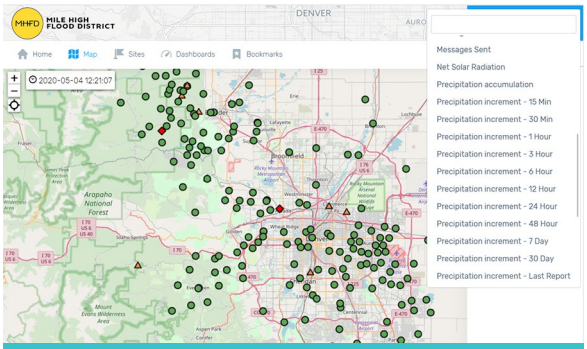
Pinpoint forecasting



Flow & level monitoring



High-water detection



Early warning & alerting

Service area 3:
Wildfire risk management

Major wildfires are growing in frequency, both for areas that have traditionally experienced high fire risk and for others that previously weren't considered as susceptible. Since 2013, there have been 8 billion-dollar fire events across the U.S., with an average impact of $12.2 billion. That represents 320% growth in the economic impact of wildfires over the previous ten years.

While fighting those fires is largely a public responsibility, private sector businesses in fire-prone areas need a strategy in place to protect their human resources and business infrastructure from the risk of wildfires. For utility providers in particular, the obligation to understand the interplay between weather, infrastructure, and natural resources is becoming closely tied to public perception and business reputation.

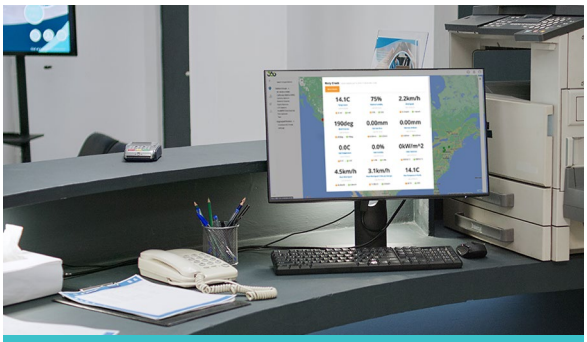
To help businesses increase wildfire readiness and response capabilities, we provide a variety of intelligence and alerting services:

Core solutions

Fire weather networks

Intelligent fire watch cameras

Lightning detection

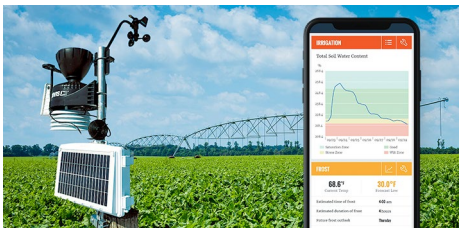


Wildfire intelligence hubs

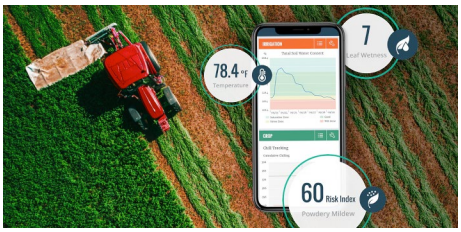
Focus industry: Agriculture

PACKAGED OFFERINGS

Weather stations & soil sensors that provide farmers with reliable hyperlocal data



Empowering software offerings that transform station & sensor data into actionable intelligence



Real-time intelligence to support decisions around severe weather events, wildfires, and beyond

> We couldn't do what we're doing today without the backend connections we can make using AEM's API service. The connectivity is a major difference-maker. It's a reliable weather station, and the APIs allow us to bring our data directly to [farmers] through our app.

Steven Mason,
Ag Technology Specialist,
Co-Alliance

CO-ALLIANCE

Focus industry: Aviation

PACKAGED OFFERINGS

Hyperlocal lightning detection & alerting for ground crew safety and optimized operations

Tarmac & runway monitoring for ice detection and water level monitoring in coastal settings

Forecasting & resilience support from our dedicated Meteorological Services Team

> From Randy Smith, our aviation specialist, down to the national outlook for weather that [they] send us via email… the tech support and the behind-the-scenes crew has been nothing but awesome. Thank you for your product and for keeping our airline safe!

Kevin Crowley,
Ground Safety Programs,
JetBlue Airways

jetBlue

Focus industry: Mining

PACKAGED OFFERINGS

Water management & precipitation monitoring systems that ensure regulatory compliance

High-accuracy forecasts & situational intelligence to protect your employees and equipment

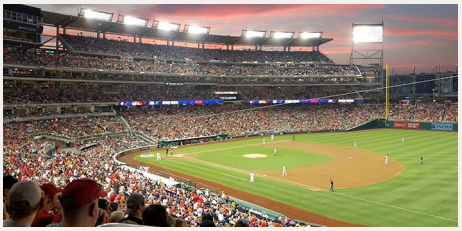
Support from our Meteorological Services Team to increase resiliency for severe weather events

> Working with AEM, we've been able to increase our understanding of how our operations, local hydrology, and the weather all come together. Now, we're able to keep people safer and ensure we're having a responsible impact.

Operations Manager,
Major International Mining Company

Focus industry: Professional sports & private clubs

PACKAGED OFFERINGS



High-accuracy forecasts to support event planning and operational decision-making

Hyperlocal lightning detection & alerts to maximize safety while minimizing false alarms

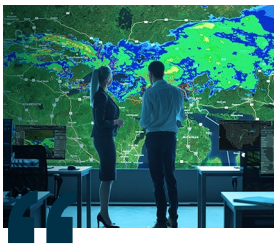
Custom weather dashboards & monitoring networks that make weather intelligence digestible

> The turnkey utilization of products is powerful for us... There's a lot of transparency in terms of what it provides and how to utilize it. From arrival of product to installation to going live, it's very seamless.

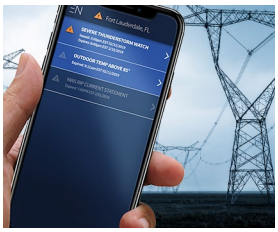
Leo M. Luistro IV,
General Manager & COO
Savannah Yacht Club

Focus industry: Power utilities

PACKAGED OFFERINGS



Pinpoint hyperlocal forecasts & 20 years of historic data for demand/ outage modeling



Real-time weather alerts to optimize field crew operations while keeping workers safe

Wind, lightning, and ice monitoring to track weather strain and impact on infrastructure

Wildfire monitoring network design and enablement to protect your customers & reputation

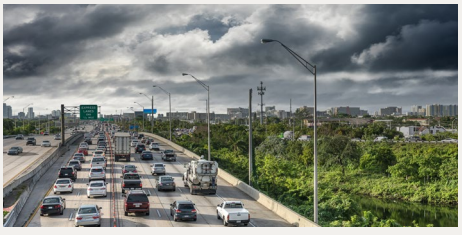
Weather stations and sensors to plan, monitor, and optimize the transition to renewables

> The ease of working with AEM was very attractive to us... Getting our network up and operational was a very quick process... The way that AEM is working to add additional technologies to their camera network and always looking to bring more things to the table is key for us.

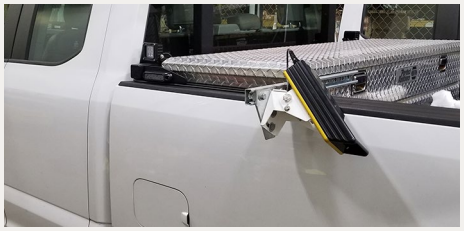
Pam Feuerstein,
COO
CORE Electric Cooperative

Focus industry: Shipping & transportation

PACKAGED OFFERINGS



High-accuracy forecasts and real-time storm tracking for route optimization



Mobile vehicle-mounted road weather sensors to provide drivers & managers with timely alerts

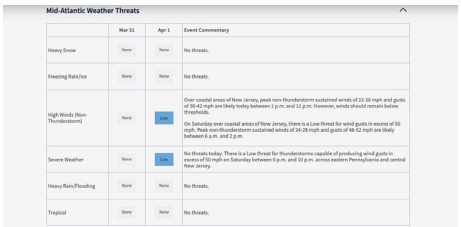
Maritime weather stations and wind sensors to optimize use of fuel and crew/cargo safety

> We've always taken forecasts into account when it comes to routing, but working with AEM, we've been able to optimize travel times and use of fuel for each individual voyage. When we redirect a vessel or change course, we need to be sure we're basing that decision on extremely accurate data; otherwise, we might be heading towards a situation that's actually more dangerous for our crew and cargo. AEM's global sensor network gave us the reliability we needed.

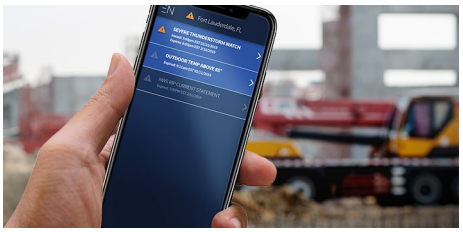
Lead Navigator,
Fortune 1000 Shipping Company

Focus industry: Construction

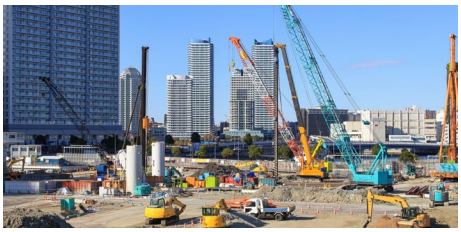
PACKAGED OFFERINGS



High-accuracy daily forecasts for a general region or specific pinpoint worksites



Automated real-time alerts and notifications for lightning, high wind, and other safety risks



Weather stations and sensors to track strain on equipment and worker safety on site

> This software is our day-to-day source of truth when it comes to what can be done and how it needs to be prioritized across all our active construction sites. Instead of wasting time arriving on-site, assessing weather safety, and reallocating teams from there, we're able to optimize each day's activities based on forecasting intel before the workday starts. When lightning or wind do assert themselves, we have clear alerts that go directly to each worker at a potentially affected site, so they know when to expect a disruption, when to put down tools and seek shelter, and also when the bad weather has passed and it's time to resume work.

Operations Manager,
Major Urban Construction/ Engineering Firm

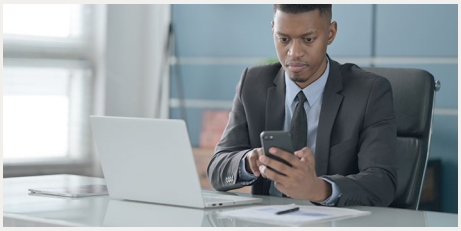
CONSTRUCTION

Focus industry: Insurance & financial services

PACKAGED OFFERINGS

20 years of historic data for any location in North America to increase weather data & awareness

Custom forecasts for major weather events to increase awareness and resilience

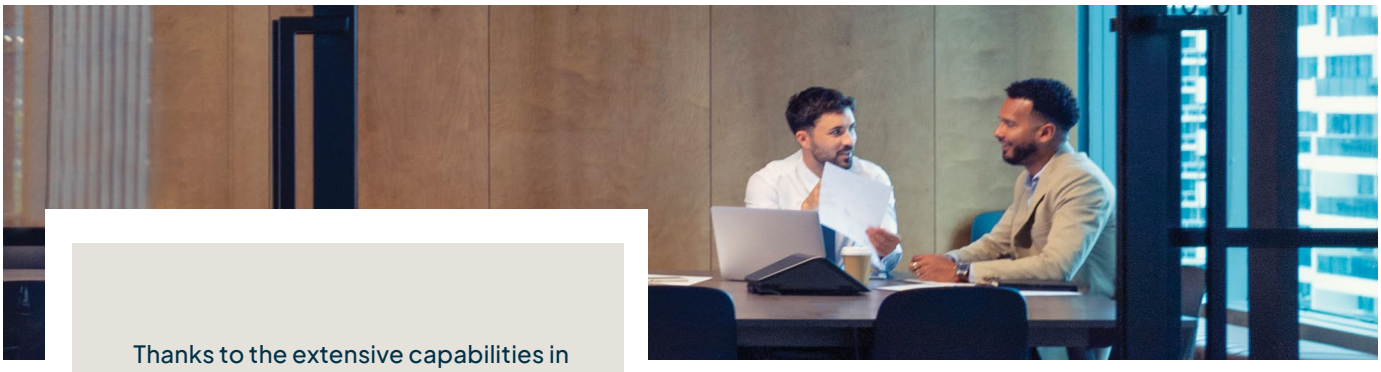


Weather alerts for employees and customers that clarify weather impact on operations

> Originally, we wanted a solution that would alert branch managers to incoming major storms so they could close locations down early. Then, we added a complementary alert for area customers to let them know we'd be reducing hours. That project made us feel much better about our weather response capacity in general. Then, when we started looking at some of the daily forecasting data we were getting, we realized the information could also be invaluable for understanding fluctuations in our local economy. Now, we bake weather data analysis and consultations with meteorologists into basically all our business decision-making, and it has us feeling a lot more ready for the future.

Regional Finance Manager,
Fortune 500 Financial Services Provider

FINANCIAL



Thanks to the extensive capabilities in our portfolio of brands, AEM can offer true end-to-end weather services for any business, including:

- Designing, installing, and maintaining weather monitoring networks
- Monitoring a wide variety of multi-weather local conditions in real time
- Collecting, analyzing, and distributing weather or data using loggers, data feeds, and APIs
- Visualizing and sharing data from the field using software that tells a clear, actionable story
- Delivering alerts to initiate action when severe weather threatens
- Providing expert support to guide decisions around weather and weather risk management

Ready to work with a business-minded weather expert?

If you're looking to join a community of future-ready businesses leveraging cutting-edge weather technology to protect people and the economy from the growing risk of extreme weather, AEM is the weather risk management partner for you.

To get a more specific understanding of how we can help you modernize your approach to weather risk management or conquer that one weather-related challenge that's been standing in your team's way, all you need to do is schedule an initial conversation with our team. From there, we'll dig in on getting to know you, your goals, and your current approach so we can make the most tailored, impactful possible recommendations.

Schedule a Weather Consultation

Related resources

PROTECTING EMPLOYEES FROM SEVERE LIGHTNING

- Increase your understanding of the environmental threats your workers face
- Align monitoring and alerting solutions to workforce management challenges
- Learn how you can create an automated approach to worker safety

WEATHER MANAGEMENT SOLUTIONS FOR POWER UTILITIES

- Learn more about energy sector solutions
- Dive deeper into today's weather challenges & solution opportunities
- Get weather risk management planning tools that help you self-assess

WEATHER MANAGEMENT SOLUTIONS FOR AIRPORT OPERATIONS

- Learn more about solutions for airports & airlines
- See how AEM aligns solutions to today's growing aviation challenges
- Get self-assessment tools to better understand your weather risks

MARITIME SOLUTIONS GUIDE

- Get a distillation of our end-to-end POV on maritime shipping
- See how you can protect cargo and crew while limiting fuel costs
- Learn more about specialized maritime sensors

GOLF SAFETY WEATHER SOLUTIONS

- Learn best practices for weather-ready course, club, and facility management
- See how to create a powerful, automated lightning alerting system
- Discover how to connect with the weather intelligence you need to avoid surprises

ADDRESS

AEM
12410 Milestone Center Dr., Suite 300
Germantown, MD 20876

CONTACT US

Schedule a weather consultation