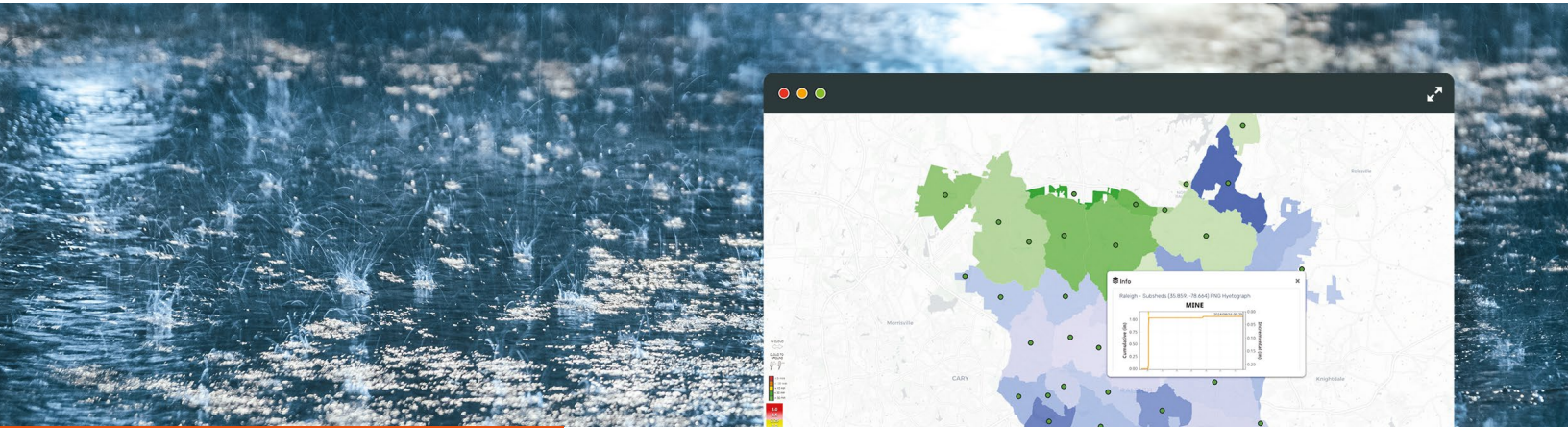


Gauge-Adjusted Radar Rainfall (GARR)

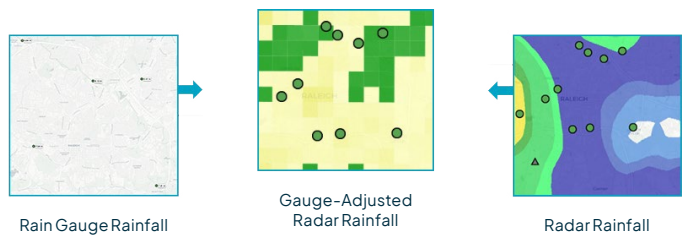
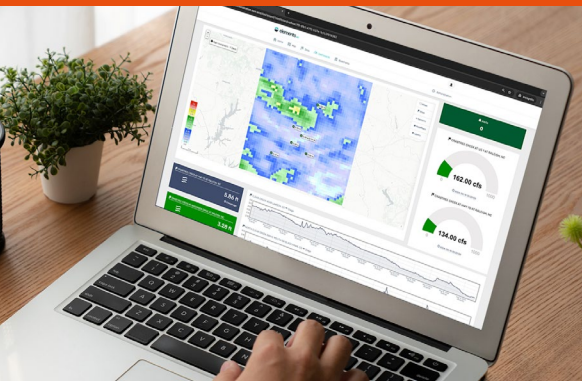


We felt that the [AEM] model...worked better than other proposals for urban areas and the flashy flood situations that we have. I think we made a wise choice because the watch points that we have in our system, it's amazing how accurate they are...on the timing and the height.

— Kelly Daniel,
Flood Early Warning System
Engineer & Project Manager
City of Raleigh, North Carolina

Precise, real-time rainfall data – anytime, anywhere

Swift and unpredictable flash floods demand accurate, timely data. But rainfall is variable in both time and space and can be difficult to accurately measure when and where you need it most. Rain gauges offer real-time readings at a single location, and radar covers wide areas with less frequent updates, but neither alone can fully capture rainfall variability. Gauge-Adjusted Radar Rainfall (GARR) bridges this gap, combining the strengths of both to deliver real-time, accurate rainfall measurements across any region, helping you make informed decisions and respond to flood events with confidence.



BENEFITS

- Enhanced Decision-Making:** Minimize errors in rainfall measurements for timely decisions and fast response during flood events.
- Scalable Precision:** Extensive spatial coverage provides accurate rainfall data across large areas and where rain gauges are sparse.
- Reliable Performance:** Eliminate downtime with continuous, accurate rainfall monitoring, even in the event of gauge or radar outages.
- Cost-effective:** Minimize investment in ground-based sensors, lowering operational costs while maintaining high-quality data.

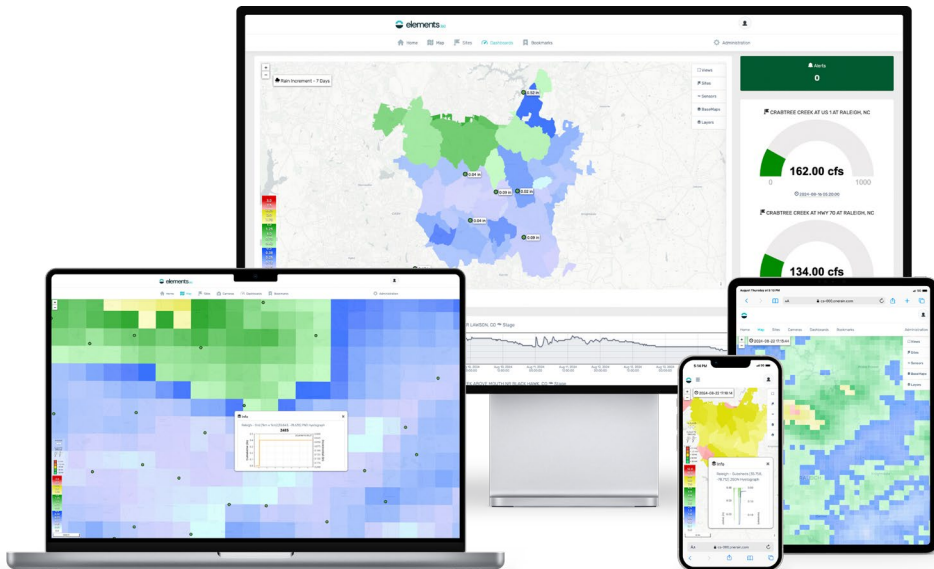


ASK ABOUT: AEM ELEMENTS™ 360

Take command of flood risk management with AEM Elements 360. Convert data into actionable insights for a more efficient and effective response to natural hazards.

More accurate radar rainfall

AEM's GARR is produced using a unique approach that better represents rainfall quantity, location, and timing from sewer catchments to watersheds to river basins and more.



HIGH-RESOLUTION RAINFALL MEASUREMENTS

More accurately characterizes rainfall by providing a rainfall measurement between rain gauges down to 1x1 km resolution.

QUALITY CONTROL

Uniquely incorporates local rain gauge data, applies bias correction algorithms to the radar, and provides automatic and/or manual quality controls.

PHYSICS BASED APPROACH

Unique quality controlled, spatially- and temporally-varied approach that can be used as an input for predictive flood modeling.

RAIN GAUGE MAINTENANCE

Know when rain gauges require maintenance by monitoring performance and health of rain gauge network

Comprehensive radar rainfall portfolio for any need

Tailor rainfall data to your specific needs, such as hourly, daily, or event-based reports, enhancing flexibility for various applications.



Post-Analysis
Historical GARR to help assess historical wet weather events



NRT (Near Real Time)
GARR for real time assessment of wet weather event conditions



EOM (End of Month)
GARR for regulatory reporting and gauge maintenance



Ready to elevate your rainfall data?

Reach out to us today at info@aem.eco to explore how Gauge-Adjusted Radar Rainfall and AEM Elements 360 can help you make confident decisions, streamline response, and safeguard lives and property.

Key applications

- Flood early warning systems
- Collection systems and reservoir management
- Watershed and stormwater management
- Emergency operations response
- Agricultural applications
- Environmental impact analysis
- Rain gauge performance and maintenance
- Regulatory reporting and forensics

