

DISASTER NEWS YOU CAN USE

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Industry News

Brace for Impact: Understanding the 2024 Tornado Season

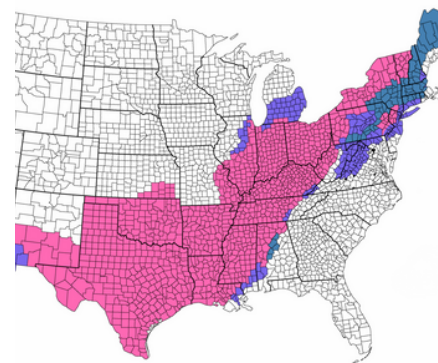
Tornado season is rapidly approaching, bringing with it the potential for significant destruction. The months of March through June mark peak tornado season across most tornado-prone regions of the United States. According to data from the National Weather Service, an average of over 1,000 tornadoes strike the US annually, resulting in dozens of fatalities and billions in damage.

As we prepare for the 2024 tornado season, we must understand the risks these storms pose to life and property. The central US faces the highest risk, with states like Texas, Oklahoma, Kansas, and Missouri in the crosshairs. April through June is the peak season in this region, when warm, humid air from the Gulf of Mexico clashes with drier winds from the west and southwest. This volatile mix sparks severe thunderstorms that frequently spawn large, damaging tornadoes. Nighttime tornadoes are also more common during these months, lending an extra degree of danger. *[Continued on Page 4.....]*

This Month in History

Winter Storm “Uri” February 13-17, 2021

Over a 5-day period in February 2021, a massive winter storm crippled more than half the United States, Winter Storm Uri cost an estimated \$195 billion and



affected twenty-seven states with conditions that ranged from over 2 feet of snow and ice, severe storms with 75 mph wind gusts, 6 tornados. and the Nation's largest blackout since 2003. *[Continued on Page 2...]*

Disaster History

This Month in Disaster History:

Historic Winter Storm Wreaks Havoc Across North America



A massive winter storm pummeled North America from February 13-17, 2021, leading to widespread devastation, power outages, and hundreds of fatalities.

Dubbed "Winter Storm Uri" by meteorologists, the weather system impacted over 170 million people as it tracked from the Pacific Northwest through the Southern, Midwestern and Northeastern U.S. before entering Northern Mexico and Canada.

The storm brought record-breaking cold temperatures, snow, and ice accumulations. These hazardous conditions downed trees and electrical lines, causing over 9.9 million residents in Texas and Northern Mexico alone to lose power.

Texas endured the worst infrastructure failure, with experts citing the state's isolated power grid as a factor. Millions of Texans were left without heat or electricity for days in sub-freezing temperatures. At least 246 people died in Texas as a direct or indirect result of the storm.

Across the U.S. and Mexico, the death toll reached 290, making this the deadliest North American winter storm since 1993. Thousands of homes and businesses also sustained damage from bursts pipes and record low temperatures.

Preliminary estimates indicate this could be the costliest storm in U.S. history, with over \$195 billion in damages. The previous record was Hurricane Katrina in 2005 at \$125 billion.

While utility crews work to restore power across the region, the extreme weather serves as a sobering reminder to prepare for disasters. Reinforcing infrastructure and having emergency plans and supplies on hand can help mitigate the impacts of future events.

Policy & Research

New Industry Policies

- [FEMA publishes 2023 Office of Response and Recovery Year in Review](#)
- [Wildfire Response Improvement Act Moves On](#)
- [FEMA Lauds Historic Funding for National Resiliency Plan](#)
- [US Government Awards NOAA Millions for Wildfire Response Research](#)
- [Lawmakers Push for Massachusetts Disaster Response Overhaul](#)
- [DHS Seeks Input on Environmental Justice Program](#)
- [Administration Announces \\$500 Million in Wildfire Resilience](#)

Other Industry News

- [Here Are the Wildfire Risks to Homes Across the Lower 48 States](#)
- [FBI Director Says China Cyberattacks on U.S. Infrastructure Now at Unprecedented Scale](#)

Industry Conferences

- Wisconsin Governor's Conference on EMHS, March 13-15, 2024 (Lake Geneva, WI)
- NEMA Mid-Year Forum, March 17-24, 2024 (Washington DC)
- National Hurricane Conference, March 25-28 (Orlando, FL)
- NACCHO Preparedness Summit, March 25-28 (Cleveland, OH)

Noteworthy Research

- [European Communities Must Prepare for Increase Flooding, Says Research](#)
- [A Foreign Government, Oprah, and Fires in Maui: The Impact of Misinformation on Community Resiliency](#)
- [Evaluating Research and Planning for Climate Migration and Displacement in the Rural and Arid West](#)
- [A Paradigm Shift in Disaster Management: Incorporating a Human Rights-Based Approach to Disaster Risk Reduction](#)
- [Emerging Technology and Risk Analysis: Synthetic Pandemics](#)
- [The Budgetary Effects of Climate Change and Their Potential Influence on Legislation](#)
- [Because Mitigation Matters: Ten New Research Projects Underway](#)

Resilient World Webinars

Join us **March 20th**, for our Resilient World Webinar, where we will demonstrate key

capabilities of Odysseus - the leading all-in-one program management and planning system. See how this intuitive solution can support preparation, response, recovery and mitigation for the tornado and flood seasons ahead. **Register Early Here!**



Industry News

Brace for Impact: Understanding the 2024 Tornado Season.....(continued)

The southeastern states see a high number of tornadoes as well, though these tend to peak earlier, during the late winter and early spring. States like Arkansas, Louisiana, Mississippi, Alabama, Georgia, and Florida all fall within Dixie Alley, a region infamous for fast-moving, difficult to detect tornadoes. Florida's unique geography makes it the state with the highest density of tornadoes per square mile.

In addition to traditional preparedness measures, new technologies are emerging that can help communities better prepare for and quickly recover from tornado disasters. Advanced weather tracking systems provide earlier warnings, while disaster management software gives real-time damage assessments to expedite recovery efforts. These damage assessment tools allow emergency managers to quickly collect geo-located imagery and data on individual property damage via mobile devices. The software then aggregates this data into maps and reports that give decision-makers vitally important information to prioritize response and understand the true scope of needs across the community. This technology provides sizable benefits over manual assessment methods in both speed and accuracy. Building stronger emergency communications networks ensures critical information reaches those who need it quickly during tornado events. Regardless of where tornadoes form, proper preparedness and quick response to warnings can save lives.

Community leaders should ensure tornado response plans engage the whole community through education campaigns, preparedness drills, and accessible shelter options. Residents can prepare emergency kits, identify ideal shelter locations, and sign up for advance warning alerts. Following proper safety precautions when tornado warnings are issued can prevent unnecessary tragedy amidst these destructive storms.

Though devastating to the areas they impact, tornadoes account for just a small fraction of overall severe storms. Maintaining vigilance and proper preparedness is key to saving lives and minimizing losses. This tornado season, resolve to stay informed, make smart decisions, and safely ride out these extreme weather events.



SITE INSPECTION

TOOL

ASSESS, LOG, AND MANAGE DISASTER DAMAGES IN REAL-TIME

The Odysseus™ | SIT offers a ready-to-use application for real-time damage assessments and log site-specific damage inventory. The SIT is customizable, mobile friendly, and integrated with the GMT to streamline disaster recovery and the FEMA reimbursement process.

[Click Here to Learn More!](#)

Industry News

Weathering the Storms Ahead: Building Flood-Resilient Communities



As we look ahead to the 2024 flooding season, we must remain vigilant about the threat that flooding poses to communities nationwide. When floods overwhelm defenses, the devastation can be immense – homes, businesses, and critical infrastructure damaged or destroyed; economies disrupted; livelihoods ruined; emotional and physical health impacted. Climate change may further intensify rainfall and storms, bringing more frequent and extreme flooding. All communities are vulnerable in some way. Those with fewer resources suffer disproportionately. But preparation and mitigation can reduce risks and pave the way to recovery. By working cooperatively now on protective infrastructure, assistance funds, response coordination, restoration projects, and continuity planning, we can build resilience against flood loss and distress. Staying attuned to flood dangers will help safeguard our collective well-being now and in the future. With vigilance and compassionate action, we can weather coming storms.

Flooding poses a serious threat to communities across the nation year after year. When floodwaters overwhelm defenses, the effects can be utterly devastating – homes, businesses, and infrastructure critically damaged or ruined; local economies brought to a standstill; livelihoods lost; health and wellbeing impacted. Climate change threatens to make matters worse by intensifying heavy rainfall and storms, leading to more frequent and extreme flooding. No community is immune from potential harm. Those with the fewest resources often bear the heaviest burden, as they struggle to recover. But with vigilance and compassionate action, we can mitigate dangers and build resilience in the face of this threat.

Industry News

Weathering the Storms Ahead: Building Flood-Resilient Communities

By working cooperatively now on protective infrastructure upgrades, assistance funds for vulnerable groups, coordinated emergency response plans, floodplain and wetland restoration projects, and continuity planning for schools and healthcare facilities, communities can greatly reduce their flood risk and pave the way for more rapid recovery. Public education campaigns focused on flood preparedness and insurance options also play a vital role. As flooding may only worsen with climate change in the coming years, we must remain attuned to the threat and left no community behind to face future storms and floods alone. With shared vigilance, resources and responsible development policies, we can weather the tide and build safer, stronger and more climate-resilient communities for all.

If you need assistance reach out today to partner with the emergency management and rebuilding experts at ISC – our evidence-based flood solutions allow rapid rebounding. With us, communities can face these threats confidently.



RECOVERY HOTLINE



Industry Best Practices

Keeping Communities Running: The Critical Role of Lifelines in Disaster Response

When disasters like hurricanes, earthquakes, or even pandemics strike communities, critical infrastructure fails and services get disrupted. Without electricity, passable roads, healthcare, or running water, communities grind to a halt, with cascading impacts on human health, safety, and economic functions. The immediate priority for response teams must be stabilizing and reconnecting these critical services that communities rely on.

FEMA refers to these essential services as “Community Lifelines” – the infrastructure, assets, capabilities and services that enable all aspects of community functionality. Lifelines are the foundation that supports societies through day-to-day operations and in times of crisis. When disasters sever access to lifelines, decisive and rapid intervention is imperative in order to enable broader community recovery.

FEMA established the Community Lifelines concept for disaster management to:

- Reframe incident information into plain language: Lifelines simplify complex infrastructure into easy-to-understand critical services like Food, Water, Shelter, Transportation, Energy. This helps promote unified understanding across government, NGOs, and private sector partners.
- Understand real-world impacts on communities: With lifelines framing, assessments reveal actual access and service delivery issues affecting disaster survivors – not just infrastructure damage. This focuses response on urgent human needs.
- Prioritize response based on community stabilization needs: Lifelines make it clear which services require immediate intervention for community functioning vs longer-term recoveries. Response priorities focus on rapid reconnection of critical lifelines.
- Simplify communications with the public: Lifelines-framed public messaging conveys response progress in straightforward terms related to restoring electricity, healthcare access, passable roads, etc.

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Industry Best Practices

Keeping Communities Running: The Critical Role of Lifelines in Disaster Response

The Community Lifelines concept has already been validated during major disaster responses including hurricanes, typhoons, earthquakes, and the COVID pandemic. With each activation, lessons learned further refine the construct to make it an increasingly effective disaster management approach.

In a crisis, the trajectory of the disaster aftermath hangs on the ability to rapidly stabilize and reconnect Community Lifelines. Doing so stems the tide of expanding impacts to human health, public safety, and broader economic functions. By framing disaster management around critical lifelines, assessment and response practices become focused on community priorities, easily understood by all partners and the public. Rapid lifeline stabilization paves the way for accelerated recovery towards full community resilience. Continued on Next Page.....

Community Lifelines

lifelines@fema.dhs.gov fema.gov/lifelines

Definition

A lifeline enables the continuous operation of critical business and government functions and is essential to human health and safety or economic security.

Purpose

- Root Cause Analysis
- Interdependencies
- Prioritization
- Ease of Communication

Assessing

- Status → What?
- Impact → So What?
- Actions → Now What?
- Limiting Factors → What's the Gap?

Community Impact

Occurs when basic lifeline services or capabilities are disrupted and reduce their ability to provide critical services to survivors.

COMPONENTS of Lifelines



Industry Best Practices

Keeping Communities Running: The Critical Role of Lifelines in Disaster Response

For almost two decades, ISC and our team of experts has championed research and development devoted to understanding the interconnectedness of vital community lifelines, their cascading impacts after a disaster, and developing strategies for building resilient infrastructure and communities. From developing sophisticated methodological tools to evaluating over 4,500 indicators and measurements of community lifeline vulnerabilities to evidence-based methods assessing the interdependencies and cascading impacts of vital community infrastructure assets and key resources, ISC has served as an industry leader in Community Lifelines.

Our team of experts have developed methods that allow our clients to adhere to the programmatic directives provided by FEMA while still delivering community-specific results that

thoroughly investigate the vulnerability of a community's vital lifelines, develop meaningful strategies to integrate this into a comprehensive emergency management program, and design a roadmap for building a resilient tomorrow.

As development expands and technologies advance, infrastructures become:

- Regionally, nationally, and globally interconnected.
- Increasingly complex and interdependent.
- Progressively critical to a modern functioning society.



Community Lifelines Vulnerability, Risk & Resiliency Model



Our leading experts have been focused on developing Community Lifelines innovations and solutions for almost two decades. The Community Lifelines Vulnerability, Risk & Resiliency (CVR2) Model serves as a dynamic planning tool that utilizes proven hazard analysis strategies and processes to build partner consensus, ensure uniformity, and provide results that are operationally significant. CVR2 operates by utilizing a number of input parameters consisting of hazard profiles, economic, social, physical community

vulnerabilities, other special community concerns. These inputs are assessed and evaluated to determine the risk to the community from a specific or multiple hazard threat(s). The output of the CVR2 Model is a prioritized indication of planning risk considerations that can be incorporated into the community's comprehensive preparedness efforts, providing a foundation that will increase programmatic efficiency, operational effectiveness, and a unified common operational picture. The CVR2 Model is a culmination of over 100 years of knowledge and incorporates over a decade of research of hazard risk assessment methodologies by several of the nation's premier disaster researchers.

Case Study

Helping FGCU Document Flood Damage: A Case Study in Rapid Assessments

When Hurricane Ian unleashed severe flooding across Florida Gulf Coast University's (FGCU) campus and surrounding community, launching swift and thorough damage documentation was crucial for recovery. Within 48 hours of storm onset, the university partnered with ISC to leverage their Odysseus™ Site Inspection Tool (SIT) for accelerated mobile assessments.

The Odysseus SIT allowed ISC field teams to evaluate over 100 FGCU buildings, facilities and infrastructure assets directly on smartphones and tablets. Despite campus-wide power, water and WiFi disruptions, the mobile interface enabled inspectors to walk sites while capturing time-stamped photos, descriptions, GPS coordinates and cost estimates without reliance on connectivity.



In under three weeks, comprehensive documentation aligned to FEMA reimbursement requirements for all university property damage from Ian had been gathered. Once online, all details instantly synced with ISC analytics dashboards. FGCU leadership gained vital visualizations of the complete damage picture to inform funding requests and prioritize repairs. Tight system integrations connected findings directly into recovery grant applications.

The streamlined approach facilitated by the ISC Odysseus SIT allowed FGCU to thoroughly assess widespread flood impacts across a large-scale environment much faster than traditionally possible. Key outcomes included:

- 48-hour field team mobilization after Ian made landfall
- Detailed documentation for 100+ FGCU asset sites within three weeks
- Mobile compatibility enabled unhindered data gathering without power/WiFi
- Synced findings with FEMA category templates for maximum allowable recovery
- Integration with financial management systems accelerated access to relief dollars

Purpose-built for simplicity and speed, the Odysseus SIT proved invaluable for helping FGCU chart an effective flood damage recovery strategy grounded in rapid yet comprehensive situational clarity. The tool's specialized capacity to capture accurate field insights quickly is a case study in responsive flood assessment best practices.



[**Click Here to Learn More
about our SIT!**](#)



D Y S S E U S TM

672%

INCREASE IN
PROGRAM EFFICIENCY

300^x

STAKEHOLDER
COLLABORATION

99%

REGULATORY &
PROGRAM COMPLIANCE

54^x

RETURN ON
INVESTMENT

97%

PERFORMANCE
RATING

The Industry's First Comprehensive Emergency and Disaster Program Management Software

Odysseus™ offers a suite of tools and systems designed, dedicated to the efficient management of comprehensive disaster and emergency management programs. The union of technological and programmatic features offers organizations an efficient and effective method to systematically design, develop, maintain, and continually improve all elements of a comprehensive emergency management program.



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Innovative Technology

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