

This strategy was developed in partnership with Dr. Gregory R. Witkowski and his students in the 'Disaster and Community: Philanthropic and Nonprofit Engagement' graduate course at Columbia University's School of Professional Studies. The research and writing were carried out by Lexi Long (lead author), Niki Marin and Abbie Nash, with final editing by CDP staff.

Redefining Tornado Recovery: Harnessing Philanthropy for Equity in Reconstruction

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Overview

Tornadoes form within large rotating thunderstorms, driven by specific atmospheric conditions including temperature differentials, moisture profiles, and wind patterns (National Weather Service, 2024). Unlike other natural hazards such as hurricanes, there are limited ways to predict with relative certainty the arrival time and severity of tornadoes. The combination of unpredictability and severity can be fatal, with tornadoes the third deadliest hazards in the United States. The Enhanced Fujita (EF) scale, ranging from EF-0 (65-85 mph) to EF-5 (over 200 mph), measures tornado intensity based on the level of damage observed (NOAA, 2024). Due to the difficulty in directly measuring tornado winds, experts typically assess wind speed/tornado intensity by analyzing the extent of damage to various structures and assigning it an appropriate EF rating (Choi-Schagrin, 2023). For example, they examine whether the damage involves only minor roof shingle loss or extends to entire sections of roofs or walls being torn away (Choi-Schagrin, 2023). Using this information, scientists infer the wind speeds and categorize the tornado on the EF scale, which is instrumental in determining the destructive potential of a tornado (Choi-Schagrin, 2023).

Tornadoes remain difficult to predict with precision where they will occur and the path they will take so that the warning system includes multiple tornado alerts (American Red Cross,

n.n., 2024). A tornado watch advises vigilance for potential tornado development and emphasizes monitoring local weather sources closely because the conditions for a tornado to occur are in place (American Red Cross, n.n., 2024). Conversely, a tornado warning indicates the imminent danger of a spotted tornado in the area, requiring immediate action to seek shelter (American Red Cross, n.n., 2024). The term "outbreak" characterizes the occurrence of multiple tornadoes within a region, often stemming from thunderstorms embedded in the same weather system (Ćwik, 2021, page 818). These events, fueled by warm temperatures and high humidity, can result in long-track tornadoes, inflicting significant damage along their path (New York Times, n.n., 2021). Nighttime tornadoes pose heightened risks, as reduced visibility increases the likelihood of fatalities, occurring more than twice as frequently compared to daytime tornadoes due to diminished awareness while individuals are asleep (Erdman, 2021).

While individual tornadoes are difficult to predict, historically many have occurred in the Great Plains, where scientists measured approximately 1,200 tornadoes annually across the states of Kansas, Oklahoma, Colorado, and Texas. Scientists note a recent trend showing tornadoes occurring more frequently in clusters (Choi-Schagrín, 2023). Additionally, there is evidence of a shift eastward in the traditional tornado alley region located in the Great Plains, where the majority of tornadoes historically form (Choi-Schagrín, 2023).

Key Facts

Over the last century, every state except Alaska was touched by a tornado (Swienton, 2019). Between 2010-2020, tornadoes caused on average \$2.5 million in property damage per storm (PR Newswire, 2021). Despite more than 5,700 tornadoes occurring during this time period, only 16 received a disaster declaration that led to federal disaster relief from the Federal Emergency Management Agency (FEMA). Unlike most other disasters, tornadoes are

unpredictable and have erratic paths of destruction, leaving neighbors in the same community to have the potential to be affected quite differently. A neighborhood could seem to have low need because of the lack of destruction in most buildings in the area, causing potential for the few families affected in that area to be overlooked for assistance relief.

FEMA assistance is heavily dependent on the ability to assess the true devastation facing a community following a tornado. This is not always black and white because although a community could appear to need less assistance, there are people within the community that do not receive FEMA funding that suffer more as a result. The Oklahoma 2013 tornadoes resulted in almost 40 deaths and billions in damages resulting from destroyed buildings, power outages, and flooding (Center for Disaster Philanthropy, 2013; American Red Cross, 2014). The Dallas Texas tornado outbreak of 2019 was the costliest storm in Texas history generating \$1.5 billion in damages, but miraculously resulting in zero deaths (Evans, 2019). The December 2021 tornado outbreak that affected ten states in the tornado alley region resulted in 90 fatalities and caused almost \$4 billion in damage (New York Times, 2021; Scism, 2021). Of these tornado disasters, the 2019 Dallas Texas tornado outbreak did not receive FEMA support despite clear evidence of the massive damage. Had FEMA approved the disaster designation request, according to Benning et al. (2020), “Texas would have been eligible for a 75% reimbursement, meaning that the region could’ve tapped into millions of dollars – perhaps tens of millions of dollars...” to reimburse the \$60 million approved by the City Council months prior.

FEMA provides coordination, response, and assistance to affected communities of tornado hazards by deploying personnel and resources, conducting damage assessments, and offering financial assistance to individuals, businesses, and local governments for recovery efforts (FEMA, 2022). State and local agencies work closely with FEMA to coordinate disaster

response efforts within their jurisdictions (FEMA, 2022). They are responsible for implementing plans, issuing orders, and providing support to affected residents and businesses (FEMA, 2022). Following the 2013 Oklahoma tornadoes, FEMA worked closely with state and local authorities to deploy teams to facilitate coordination, position resources, and maintain ongoing communication to monitor the situation. At the time, President Obama filed a Major Disaster Declaration for the entire state of Oklahoma that granted Oklahoma citizens the ability to apply for aid from FEMA, making it easier for those affected to quickly ask for help (Center for Disaster Philanthropy, 2013). Former Oklahoma Governor Mary Fallin noted that the state and local governments struggled with the capacity to tackle the recovery without outside assistance and had a “call of action” for those from across the country to assist with the disaster efforts (CBS News, 2013). First responders delivered emergency medical attention as best as they could during the tornado, despite 90% of police vehicles being destroyed and the erasure of the medical center (Ellis, 2013). The local airmen at the Tinker Air Force base also started cleaning out local’s homes, and it sparked a movement of around 100 people joining in (Maupin, 2017).

State and local agencies also collaborate directly with nonprofits to address the needs of vulnerable populations and ensure a coordinated response (FEMA, 2022). Nonprofits like the American Red Cross and Salvation Army enable immediate assistance by distributing supplies, setting up shelters, and offering medical assistance including counseling services (FEMA, 2022). Local nonprofits address the specific needs of their communities which involve food and clothing distribution, debris removal and cleanup, and long-term support for rebuilding homes and infrastructure (FEMA, 2022). During the Texas 2019 tornado outbreak, local businesses and nonprofits including Planet Fitness and the YMCA offered free access to amenities such as gyms, showers, charging stations, storage facilities, and essential supplies like food, water, and

medical care (DiFurio, 2019). Additionally, the North Texas Food Bank, in partnership with the Salvation Army and the Red Cross, distributed food and water to impacted households (DiFurio, 2019). A local financial services nonprofit, On the Road Lending, created a Disaster Mobility Program to support those whose cars were damaged or destroyed (DiFurio, 2019).

Also during this phase of tornado recovery, funders provide essential financial support enabling immediate relief efforts to affected communities. In the aftermath of the 2021 tornado outbreak, grants supporting tornado recovery recognized that there is no longer a true “tornado season” so providing flexible funding initiatives ensure necessary accessibility (Center for Disaster Philanthropy, n.d). The Felix E. Martin, Jr. Foundation and the Community Foundation of West Kentucky's funding support demonstrated a commitment to expanding organizational capacity and coordination efforts across multiple counties (Conroe and Ray, 2021). These grants enabled the establishment of disaster response coordinators, relief centers, and the provision of resources to address the unmet needs of residents (Conroe and Ray, 2021). SBP and the Northwest Tennessee Development District provided direct assistance to disaster-affected individuals and families, securing additional government resources, and supporting rural areas' recovery efforts over multiple years (Conroe and Ray, 2021). The SBP FEMA Appeals program ensured that those most in need received the necessary support for their recovery journey (Conroe and Ray, 2021).

Key Findings

- **FEMA Support vs. No FEMA Support**
 - FEMA’s support makes a difference in the ways that communities recover following a tornado. When there is no emergency declaration that brings FEMA support, it is harder for communities to rebuild effectively.

- **Relevant Link(s):** [FEMA 2022: One year later, tornado recovery continues to make progress](#); [FEMA rejects Texas' disaster request over Dallas' October tornadoes, denying region millions of dollars](#)
- **Necessity of Bipartisanship**
 - Bipartisanship is required following any tornado for effective results. Local, state, and federal leaders need to work together to achieve maximum recovery potential.
 - **Relevant Link(s):** [FEMA 2021: Responds to Tornado Outbreaks](#)
- **Pre-Covid vs. Post-Covid Factors**
 - The nature of relief, recovery, and reconstruction is different post-Covid than it was prior. Multiple disasters in a community at the same time complicate relief for all involved.
 - **Relevant Link(s):** [Learning from the COVID-19 Pandemic: When Public Health and Tornado Threats Converge](#)
- **Emotional Effect**
 - These tornadoes last for a brief period of time, the physical damage lasts for years, and the emotional effects last a lifetime. Mental health following a tornado is important to address for all survivors.
 - **Relevant Link(s):** [Mental health struggles of storm survivors](#)
- **Social Capital and Network**
 - The network within communities and access to social capital makes all of the difference within recovery processes. A strong community and access to resources advances recovery, especially for individuals but also infrastructure.

- **Relevant Link(s):** [The Team Western Kentucky Tornado Relief Fund](#)
- **Importance of Equity**
 - Equity is important for donors and government organizations to recognize. Disasters have a greater impact on poor and minoritized communities that often lack the resources before a disaster to prepare and after a disaster to recover.
 - **Relevant Link(s):** [As Disaster Costs Rise, So Goes Inequality](#)
- **Size and Location of Affected Area**
 - The size and location of an affected area will determine the diversity of needs after a tornado. Efforts to help following these storms need to be adjusted based on economic need, size of population, and geographical landscape.
 - **Relevant Link(s):** [FEMA 2021: Responds to Tornado Outbreaks](#)

How to Help

We suggest approaching tornado recovery with an equity lens because disaster recovery has historically disproportionately hurt the already disadvantaged. Social capital is embedded within all successful reconstruction efforts following a tornado. However, some communities and certain populations within communities themselves are able to use social capital to their advantage more than others, leading to perpetuating inequity that follows tornado destruction. The graph below showcases how during disasters from 1999 to 2013 that white people gained wealth whenever a disaster struck while Black people kept losing wealth (Howell & Elliot, 2018).

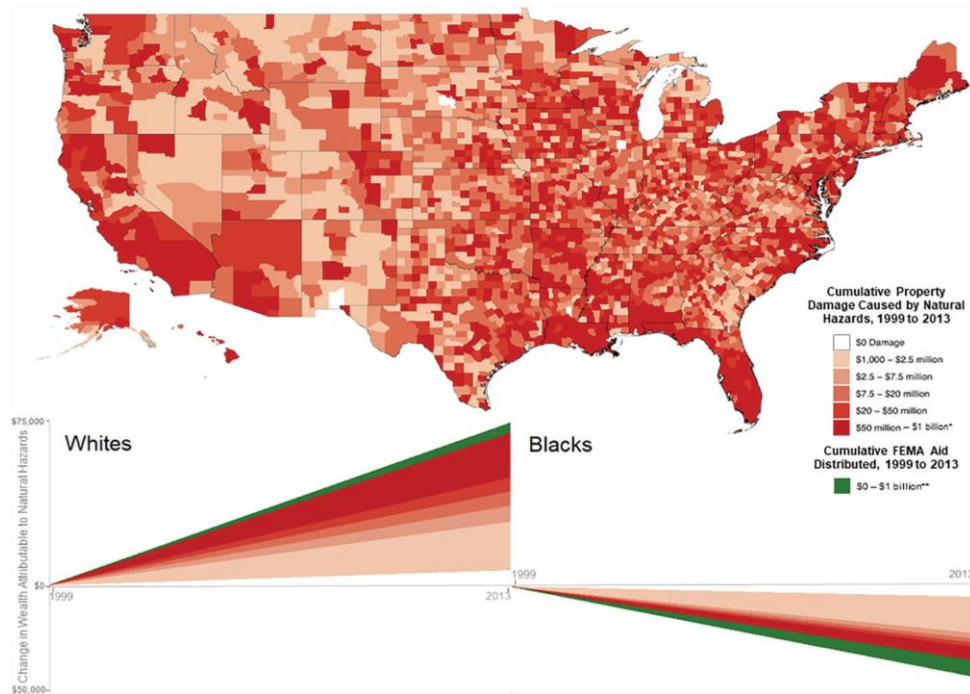


Figure 1. Cumulative Property Damage Caused by Natural Hazards, 1999 to 2013 (Howell & Elliot, 2018).

When wealthy white victims are affected by a disaster, they are more easily able to have connections as well as generational wealth to get through the challenging recovery process. Decisions can be made with the wealthiest in mind that impact those poorer. For instance, FEMA did not fund North Dallas residents after the 2019 tornado due to the high average socioeconomic status of the households there and the high number of households with insurance (“2019 Dallas”, 2020.). This led to lack of funding for those who were uninsured and desperately needed assistance, as well as the lack of documentation needed for any FEMA help at all.

Another barrier facing those following a tornado is the potential for people to suffer in silence without help due to strenuous circumstances. An example of this occurring was following the 2013 Moore tornado when Latino communities struggled with receiving support due to the lack of Spanish speakers within the government and supporting organizations, leaving local Pastor Chano Najero as a leader in helping these victims equitably receive resources (Lo Wang, 2013). This is devastating and shows how funders, nonprofits, and government officials need to analyze

who needs the most help and ensure that funding is equitably distributed and assistance is equitably dispersed. Funders specifically need to keep in mind what specific populations following a tornado were affected the most, who is already receiving the most help, who has emergency resources to fall back on, and what the community itself lists as their highest priorities for recovery and reconstruction. Carrying out this funding requires having equity within the funding organization as well and ensuring that a diverse community is making decisions about where money should go. Building back better requires building back better for everyone or you are just putting a temporary bandage on systemic inequities.

When dealing with such immense potential for loss of life and damage, nonprofit and funders possess unique opportunities to meet ongoing needs at every stage of recovery following a tornado. As the needs of those impacted by tornadoes change over time, so too do the main ways the nonprofit sector can help. Immediately following a tornado outbreak, community needs center around emergency relief and meeting basic needs. With homes and businesses destroyed, households need debris removed, the restoration of electricity, and food and water. Following the Dallas 2019 tornadoes, 65,000 Dallas residents were without power due to downed power lines, and according to firsthand accounts from residents, Dallas police placed those affected under curfew from 7am to 7pm to keep citizens safe from downed lines and prevent looting of destroyed buildings (Evans, 2019). The destruction conditions following tornadoes leave communities having to initiate relief efforts within hours of the storm, with local citizens, nonprofits, and businesses lending available support to clean up affected areas, provide food and water for those affected and first responders, and provide electricity where available until utility companies can restore it. Affected households often have immediate financial assistance needs to support

themselves; organizations like the Red Cross frequently provide this type of immediate cash assistance to allow households to prioritize their recovery (Red Cross, 2019).

During relief, nonprofits are primed to provide a variety of services that meet the illustrated needs of tornado-affected households. As noted, nonprofits' adaptability and ability to move quickly undergirds emergency relief, and nonprofits are often at the forefront following a tornado of providing food and water, emergency medical care, mental health care, and financial assistance. Expanding organizations that are created to respond to disasters, like the Red Cross, are also often critical coordinators during tornado relief efforts, working in partnership with FEMA and other local and state government actors to deliver a coordinated response in affected areas. Beyond providing services, nonprofits can also support during relief by drawing attention and raising public awareness of the impact of tornadoes to support fundraising efforts. For example, following the December 2021 tornado outbreak, the devastation from the storms captured national media attention. Local leaders and spokespeople, as well as those with large amounts of social capital, can generate national interest and financial support.

Within a few weeks after a tornado, activities shift from providing emergency relief to longer term recovery efforts. Affected families and business owners begin to turn their attention away from removing the downed trees in their area to planning for the rebuilding of their properties. Impacted individuals continue to need long term emotional and mental health support as they navigate returning to or rebuilding their homes, schools, and businesses. As with relief, providing mental health services and resources is an important place for nonprofits to contribute to recovery efforts. Following the Oklahoma 2013 tornadoes, Project Moore Hope was created through Moore Youth and Family Services to provide mental health resources to students whose schools were destroyed in the storm. (Guevara and Hunger, 2019). This project still is in service

today and is free to students, caregivers, and parents who survived the tornado and need support (Moore Youth and Family Services, 2024).

During recovery, impacted households also begin navigating difficult insurance and financial markets that exist, especially learning to understand what assistance is available to them through FEMA, local and state governments, and private insurance markets. Legal aid nonprofits can provide particular help in this area, providing legal support to affected families including housing matters, lost or damaged documents, insurance claims, and more. The Legal Aid of Northwest Texas provided free assistance to low-income Texans following the 2019 Dallas tornado to support a variety of legal needs including housing matters and lost or damaged documents (DiFurio, 2019).

Similar to the relief phase, during recovery, nonprofit organizations and government entities still need to maintain a clear plan for coordination and communication, especially as some actors leave after emergency relief is completed. During recovery, FEMA funds continue to flow into communities to support long-term needs, and having a clear strategy for how to use those funds at the individual and community levels is critical for a successful recovery. Nonprofits, particularly grassroots nonprofits, have a role to play in maintaining a clear delivery of funds to affected community members, and understanding community needs to support recovery.

Longer term reconstruction following tornadoes also generates its own set of needs to allow a community impacted by a tornado to build back better. Areas in high tornado areas need durable shelters that remain up to federal building codes from FEMA in preparation for future storms. Following the October 2013 tornadoes, the affected community of Moore put storm shelters in 35 new buildings and had new homes built that could withstand 135 mph wind speeds. The Dallas community following its 2019 tornadoes took multiple opportunities to

upgrade destroyed structures, including creating two brand new schools with larger classrooms, updated technology, and new dual-language capabilities to support the Spanish-speaking students in the community (Zheng, 2023). Dallas local government also rebuilt a destroyed fire station with new capabilities to respond to tornadoes and conducted an environmental progress report on affected public transportation infrastructure in hopes of making environmentally friendly and community-centered improvements (Callaghan and Williams-Eynon, 2020). Nonprofit response at this stage looks fairly similar to recovery efforts, with organizations supporting clear allocation of government funds, communicating community needs at the grassroots level, and providing ongoing support services. As communities continue to move past a storm and prepare for future ones, individuals and affected communities should maintain a clear plan for receiving accurate information on storms, including using local community news and organizations that understand needs on the ground most intimately. Nonprofit news organizations and local agencies play a crucial role in preparing communities for storms and communicating factual information during each phase of recovery.

What Funders are Doing

Funders play a key role in the successes and wins during relief, recovery, and reconstruction efforts following a tornado. Foundations, recovery funds, major donors, the media, and the local community affected are essential parts of effective funding. Established foundations and recovery funds as well as funds established as a response to the tornado in question are important. The infamous Moore, Oklahoma City, and El Reno tornadoes in 2013 caused countless organizations to donate such as The American Red Cross, Salvation Army, and Save the Children (Center for Disaster Philanthropy, 2013). Following the devastation, Tulsa Community Foundation's Moore and Shawnee Tornado Fund, Network for Good, Oklahoma

City Community Foundation, and OK Strong fund were founded as a response to the disaster and used their monetary support in different ways to help rebuild communities (Center for Disaster Philanthropy, 2013). They all addressed recovery in unique ways such as the following (Center for Disaster Philanthropy, 2013):

- Tulsa Community Foundation aimed to support longer-term needs for the community relating to recovery and reconstruction efforts.
- Network for Good was established to make locating resources easier and more streamlined for those who needed assistance.
- The Oklahoma City Community Foundation had a fund set up for emergency relief and a fund set aside for longer-term assistance.
- The OK Strong fund was created by Former Governor Mary Fallin and United Way of Central Oklahoma to help with educational, emotional, and medical needs facing victims.

The December 2021 tornadoes that affected several states triggered assistance from a plethora of different foundations and funds. Center for Disaster Philanthropy created a Center for Disaster Philanthropy (CDP) Tornado Recovery Fund following these disasters to help with pressing needs (Center for Disaster Philanthropy, 2022). The CDP also provided support through their Midwest Early Recovery Fund that funded the following organizations:

- \$103,400 to The Community House Foundation in Trumann, Arkansas to support a disaster recovery coordinator for eighteen months of recovery coordination needs.
- \$110,000 to the Salvation Army's Arkansas/Oklahoma Division for disaster case management services as they support recovery. Primary locations include Poinsett (Trumann), Craighead (Monette), and Mississippi (Leachville) counties.

- \$19,800 to the Castlewood Community Foundation to support casework, recovery task force development and children's psychosocial needs.
- \$120,000 to the Northwest Arkansas Child Care Resource & Referral Center (now Child Care Aware of Northwest Arkansas) to support recovery needs for children and caregivers. Funds support the hiring of a specialist/coach for caregivers, training for over 500 providers, educators, parents, and caregivers, and a one-day conference providing education and information about trauma responses.
- \$250,000 to the Bernard Project to support the SBP FEMA appeals program, which secures additional government resources for recovery to benefit those most in need of those resources. This program has succeeded in an average of \$7,991.83 dollars per household reclaimed following natural hazards.

Major donors are instrumental in providing necessary resources needed for change.

Examples of major donors involved in tornado recovery efforts include Kevin Durant and the Oklahoma City Thunder donating \$1 million dollars each to combat damage from the 2013 storms the state faced and rapper Jack Harlow contributing \$250,000 to the Kentucky Red Cross in 2021 to help with relief efforts (CBS News Miami, 2013; Aderoju, 2021). The 2019 tornado in North Dallas also received support from high profile donors, such as having businessman Jerry Jones donate \$1 million to reconstruct Thomas Jefferson High School and Shark Tank star Mark Cuban to give the city of Dallas \$1 Million for recovery efforts (Evans, 2019). Considering the importance of high-profile donors in receiving crucial funds, it is necessary to keep ongoing needs on the forefront of people's minds so that they are not forgotten when the next big tornado takes over news highlights. Keeping reconstruction and recovery needs following a tornado can be challenging. Recommended ways to continue reaching these valuable funders include having

annual and other anniversary campaigns from the nonprofit organizations on the ground and having news outlets publish articles, news reports, and social media posts on the ongoing need years after the tornado left the ground.

Suggested Further Reading

Charalambous (2023). How 2 Cities Rebuilt After Tornadoes and Why They May Be Models for Others. *ABC News*. <https://abcnews.go.com/US/2-cities-rebuilt-after-tornadoes-models/story?id=98149790>

Croskery, C. D., Sherman-Morris, K., & Brown, M. E. (2021, September 27). Learning from the COVID-19 Pandemic: When Public Health and Tornado Threats Converge. *American Meteorology Society*. DOI: <https://doi.org/10.1175/WCAS-D-20-0141.1>. Pages 963–973.

Liu, M. & Huang, M. (2014, January 8). Compound Disasters and Compounding Processes: Implications for Disaster Risk Management. *Global Assessment Report on Disaster Risk Reduction*. <https://www.undrr.org/publication/compound-disasters-and-compounding-processes-implication-disaster-risk-management>

Swienton, H. A., Goldberg, D., Hammond, T., Klein, A., & Horney, J. (2019). Effect of Tornado Outbreaks on Morbidity and Mortality in Texas. *Prehospital and Disaster Medicine*, 34 (Suppl. 1). <https://doi.org/10.1017/S1049023X19001171>

References

- Aderoju (2021). Jack Harlow Teams With KFC to Donate \$250,000 to Those Impacted by Deadly Kentucky Tornado. *Billboard*. <https://www.billboard.com/music/rb-hip-hop/jack-harlow-kfc-partnership-donation-tornado-relief-1235009918/>
- American Red Cross (2014). Oklahoma Tornadoes One-Year Update. *American Red Cross*. https://www.redcross.org/content/dam/redcross/atg/PDFs/Oklahoma_Tornadoes_One-Year_Update_Final.pdf
- American Red Cross. (2024). Tornado Safety. *American Red Cross*. <https://www.redcross.org/get-help/how-to-prepare-for-emergencies/types-of-emergencies/tornado.html>
- Benning, T., Norimine, H., & Avala, E. (2020, April 7). FEMA rejects Texas' disaster request over Dallas' October tornadoes, denying region millions of dollars. *Dallas News*. <https://www.dallasnews.com/news/politics/2020/04/07/fema-rejects-texas-disaster-request-over-dallas-october-tornadoes-denying-region-millions-of-dollars/>
- Callaghan, L. & Williams-Eynon, A. (2020, August 10). Tornado Recovery Emphasizing Urban and Climate Resilience around the Walnut Hill/Denton Drive Dallas Rapid Transit Station. *Urban Land Institute*. <https://knowledge.uli.org/en/reports/aspr/2020/dallas-tx-vasp>
- CBS News (2013). Okla. Gov: We "Need Quick Action" On Tornado Relief. *CBS News*. <https://www.youtube.com/watch?v=cMm93fLoSEk>
- CBS News Miami (2013). Oklahoma City Thunder, Kevin Durant Pledge \$1 Million For Tornado Relief. *CBS News*. <https://www.cbsnews.com/miami/news/oklahoma-city-thunder-kevin-durant-pledge-1-million-for-tornado-relief/>
- Center for Disaster Philanthropy. (n.d.) CDP Tornado Recovery Fund. *Center for Disaster Philanthropy*. <https://disasterphilanthropy.org/funds/cdp-tornado-recovery-fund/#:~:text=CDP%20has%20been%20active%20in,United%20States%20is%20growing%20l arger.>
- Center for Disaster Philanthropy (2013, May 21). Oklahoma Tornadoes. *Center for Disaster Philanthropy*. <https://disasterphilanthropy.org/disasters/oklahoma-tornadoes/>
- Center for Disaster Philanthropy. (2022, April 11). December 2021 Tornado Outbreak. *Center for Disaster Philanthropy*. <https://disasterphilanthropy.org/disasters/december-2021-tornado-outbreak/>
- Choi-Schagrin, W. & Zhong, R. (2023, April 3). What We Know About Tornadoes and Climate Change. *New York Times*. <https://www.nytimes.com/article/tornado-climate-change.html>

- Conroe, A., & Ray, S. (2021, January 31). CDP announces grants from the Disaster Recovery Fund. *Center for Disaster Philanthropy*. <https://disasterphilanthropy.org/blog/cdp-announces-grants-from-the-disaster-recovery-fund/>
- DiFurio, D. (2019, October 21). How Dallas-area organizations are helping those affected by the Dallas tornado. *Dallas News*. <https://www.dallasnews.com/business/local-companies/2019/10/21/what-d-fw-organizations-are-doing-to-help-those-affected-by-dallas-tornado/>
- Ellis (2013). Oklahoma Tornadoes: First Responders Suffer Direct Hit From Tornado. *The Oklahoman*. <https://www.oklahoman.com/story/news/columns/2013/06/02/oklahoma-tornadoes-first-responders-suffer-direct-hit-from-tornado/60929182007/>
- Erdman, J. (2021, January 08). Nighttime Tornadoes More Than Twice As Likely To Be Deadly. *The Weather Channel*. <https://weather.com/safety/tornado/news/2021-12-10-nighttime-tornado-threat-dangerous>
- Evans, C. (2019). *Zero Deaths From Last Week's EF-3 Tornadoes: A Texas Miracle*. *Forbes*. <https://www.forbes.com/sites/candaceevans/2019/10/28/zero-deaths-from-last-weeks-ef-3-tornados-a-texas-miracle/?sh=6ee2acf67a9d>
- FEMA. (2021, December 11). FEMA Responds to Tornado Outbreaks. *FEMA Press Release*. Release Number HQ-21-255. <https://www.fema.gov/press-release/20211211/fema-responds-tornado-outbreaks>
- FEMA. (2022, December 12). One year later, tornado recovery continues to make progress. *FEMA Press Release*. Release Number 67. <https://www.fema.gov/press-release/20221212/one-year-later-tornado-recovery-continues-make-progress>
- Guevara & Hunger (2019). The Mental Health Struggle of Storm Survivors: 'It Follows Them Forever'. *Cronkite News*. <https://cronkitenews.azpbs.org/2019/09/02/mental-health-storm-survivors/>
- Howell, J., & Elliott, J. R. (2018). As Disaster Costs Rise, So Does Inequality. *Socius*, 4. <https://doi.org/10.1177/2378023118816795>
- Lo Wang (2013). Part of The Community: Latinos Rebuild After Okla. Tornado. *NPR*. <https://www.npr.org/sections/codeswitch/2013/05/26/186704626/part-of-the-community-latinos-rebuild-after-okla-tornado>
- Maupin (2017). Moore Bounces Back After 2013 Tornado. *The Oklahoman*. <https://www.oklahoman.com/story/business/2017/04/09/moore-bounces-back-after-2013-tornado/60607582007/>
- Moore Youth and Family Services (2024). Project Moore Hope. <https://www.mooreyouthandfamily.org/project-moore-hope>

National Weather Service (2024). Tornado Definition.

<https://www.weather.gov/phi/TornadoDefinition>

New York Times. (2021, December 12). Coverage of Deadly Tornado Outbreak: Tornado News: Death Toll Rises as States Assess Damage. Updated April 3, 2023. *New York Times*.

<https://www.nytimes.com/live/2021/12/12/us/tornadoes-kentucky-illinois#how-common-are-tornadoes-in-december>; <https://www.nytimes.com/video/us/100000008116848/tornado-midwest-south.html?smid=url-share>

NOAA (2024). The Enhanced Fujita Scale (EF Scale). *National Weather Service*.

<https://www.spc.noaa.gov/efscale/>

PR Newswire. (2021, April 1). Over Past Decade, Tornadoes Caused an Average of \$2.5 Million in Damages per Storm Across the U.S. *PR Newswire*. <https://www.prnewswire.com/news-releases/over-past-decade-tornadoes-caused-an-average-of-2-5-million-in-damages-per-storm-across-the-us-301260443.html>

Red Cross Announces Emergency Financial Assistance Program Following North Texas Tornado Outbreak. (2019, October). *American Red Cross*.

<https://www.redcross.org/local/texas/north-texas/about-us/news-and-events/news/red-cross-announces-emergency-financial-assistance-program-follo.html>

Scism, L. (2021, December 17). Tornado Insurance Payouts On Track to Hit \$5 Billion. *Wall Street Journal*. <https://www.wsj.com/articles/tornado-insurance-payouts-on-track-to-hit-5-billion-11639745682>

Swienton, H. A., Goldberg, D., Hammond, T., Klein, A., & Horney, J. (2019). Effect of Tornado Outbreaks on Morbidity and Mortality in Texas. *Prehospital and Disaster Medicine*, 34 (Suppl. 1). <https://doi.org/10.1017/S1049023X19001171>

Zheng, L. (2023, February 11). *Two Dallas Schools Damaged, Destroyed by 2019 Tornado Reopen*. NBC 5 Dallas-Fort Worth. <https://www.nbcdfw.com/news/local/two-dallas-schools-damaged-destroyed-by-2019-tornado-reopen/3192548/>