

Lincoln, Nebraska

Lincoln-Lancaster County Department of Health

**Tornado Disaster Emergency Plan**



Lincoln-Lancaster County Health Department  
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Lincoln, NE 68510

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## Preface

The importance of emergency preparedness and response cannot be overstated in today's rapidly changing world. Natural disasters, human-caused, and technological hazards have the potential to disrupt communities, compromise hospital systems, government health agencies, and pose significant threats to public health. Tornadoes are one of the most prevalent natural hazards that pose a major public health threat with the potential to cause injuries, outbreaks of illnesses, mental health disorders, demographic displacement, and more.

According to the Storm Prediction Center (SPC), April 2020 was one of the most active on record for tornadoes, with 351 reported tornadoes in the United States.<sup>1</sup> Demographic factors such as higher proportion of disabled, elderly, or children, contribute towards vulnerability to natural hazards in vulnerable locations.<sup>3</sup>

Tornadoes are classified as “Weak” (65-110 mph winds), “Strong” (11-165 mph winds), and “Violent” (166-200 mph winds).<sup>15</sup> Tornadoes have been known to exceed 250 mph and can cause an incredible amount of damage.<sup>15</sup> Exposure to tornadoes can be devastating to injured survivors. People living in affected areas, especially children and teens previously exposed to traumatic, life-threatening situations during a tornado or severe storms are vulnerable to post-traumatic stress disorder (PTSD), displacement, abandonment, and are at higher risk of increased poverty.<sup>2</sup> Research study findings revealed that two and a half years after a tornado disaster, while the number of people who had depression symptoms decreased by about 8%, PTSD increased by about 14%.<sup>5</sup> Survey results also indicated that low levels of social support heightened the probability of experiencing PTSD and symptoms of depression among tornado survivors.<sup>5</sup>

Tornadoes can lead to destruction of homes, buildings, and other infrastructure which in turn can create unsanitary conditions, increasing the risk of waterborne illnesses and the spread of other diseases. Compared with other States, Nebraska ranks number 5 for occurrence of tornadoes, 23 for number of fatalities, and number 24 for injuries.<sup>6</sup>

Tornadoes cause infrastructure damage, business disruptions, and pose an economic burden upon those that are affected. In the past decade, tornadoes resulted in more than \$14.1 billion in total damage to property and crops across the US.<sup>7</sup> From the year 2010 to 2020, tornado storm surges have resulted in \$2.5 million in property damage per storm.<sup>7</sup> In May of 2023, dozens of tornadoes and several hail storms hit numerous states including eastern Nebraska, imposing a \$2.8 billion damage to homes, businesses, vehicles, farms and other critical infrastructure.<sup>12</sup>

Emergency management for natural hazards such as tornadoes is dependent upon continuous monitoring and testing and training of emergency plans to ensure an effective and rapid response.

It is important to prepare the disaster plan with full knowledge of the target area. In this case, Lincoln NB. The city is located in the southeast corner of Nebraska, Lancaster County. Lincoln is the second largest city in Nebraska, with a population of 319,000 and an area of 846 square miles.<sup>8</sup>

Lincoln has been known for its welcoming to a growing number of refugees. Today, Lincoln, Nebraska is home to over 30,000 immigrants and refugees from approximately 150 different countries.<sup>8</sup> This diversity brings together individuals from various cultural backgrounds, age groups, race, and socioeconomic statuses, creating a unique demographic composition within the community. Tornado Alley refers to a broad area of relatively high tornado occurrence in the central United States and various Tornado Alley maps look different since tornado phenomena can be measured many ways.<sup>16</sup> Eastern Nebraska is considered to be a part of Tornado Alley, making tornadoes a common disaster event in the spring and summer months and also making citizens of this area particularly susceptible to potential impacts on public health. Taking these characteristics into account, this emergency preparedness plan has been developed with specific considerations for the Lincoln-Lancaster County Health Department (LLCHD).

The Lincoln-Lancaster County Health Department (LLCHD) is the oldest and largest local health department in the State of Nebraska. LLCHD is both urban and rural in scope.<sup>9</sup> LLCHD provides critical infrastructure for public health practice through health data analysis, planning, and response to population health outcomes.<sup>9</sup> LLCHD participates in ongoing surveillance of communicable diseases, evaluating outcomes and impact, managing and distributing equipment and testing supplies during public health emergencies.<sup>9</sup> The Environmental Public Health Division exists within the Department to protect and promote the population's health by ensuring healthy environments, preventing illnesses and disease outbreaks, and safeguarding the natural surrounding environment upon which the public's life depends.<sup>9</sup> They emphasize their commitment by responding to hazardous material (HAZMAT) spills; ensuring HAZMAT waste is reduced, recycled, and disposed properly; collecting and analyzing water samples for prevention of surface and groundwater pollution; they coordinate land use reviews to prevent waterborne illnesses and other vector borne diseases; they work with businesses to prevent illnesses and diseases by adhering to good air quality measures.<sup>9</sup>

By acknowledging LLCHD's unique characteristics and the shared challenges faced by natural hazard prone areas, the emergency preparedness plan aims to provide a comprehensive framework that addresses the specific needs and risks associated with tornado storm surges.

In association with the Lincoln-Lancaster County Emergency Management (LLCEMA) guidelines and best practices, the Emergency Preparedness Plan addresses prevention, detection, and response to tornado storm disasters. It incorporates a comprehensive Emergency Plan to ensure effective coordination, communication, and implementation of emergency preparedness procedures. By sharing knowledge, resources, and expertise of dedicated public health professionals, LLCHD can strengthen their collective ability to respond to natural hazard disaster emergencies, emphasizing commitment to the health and well-being of the communities. Effective emergency preparedness requires ongoing evaluation, refinement, and collaboration. As such, this plan will be regularly reviewed, updated, and tested to ensure its continued effectiveness in addressing waterborne pathogens and safeguarding public health.

**Signature Page**

**LETTER OF APPROVAL/SIGNATURE PAGE**

**By signing below, I approve and will fully support the implementation of the Tornado Disaster Plan in Lincoln-Lancaster County Nebraska Health Department as outlined below.**

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**Department Director Lincoln-Lancaster County Health Department** **Date**

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**Board President Lincoln-Lancaster County Health Department** **Date**

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**Mayor Lincoln-Lancaster County Health Department** **Date**

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**Emergency Management Director Lincoln-Lancaster County Health Department** **Date**

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**Emergency Manager** **Lincoln-Lancaster County Health Department** **Date**

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**Emergency Services Director** **Bryan Medical Center East Campus** **Date**

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**Emergency Services Director** **Regional Healthcare Coalition** **Date**

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**Police Chief**

**Lincoln Police Department**

**Date**

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**Fire Department Chief**

**Fire and Rescue Department**

**Date**

## Base Plan

### 1. Mission Statement

*The mission of the Lincoln-Lancaster County Health Department is to protect and promote the public's health while working with partners to assure a healthy community for the residents of Lincoln, Lancaster County, NE.*

### 2. Statement of Purpose

The purpose of this plan is for the Lincoln-Lancaster County Health Department to help safeguard the health and well-being of the population by establishing an emergency preparedness disaster plan; that will benefit the citizens of Lincoln and Lancaster County in the State of Nebraska. This plan is designed to implement LLCEMA recommended guidelines, establish a risk-based approach for mitigation and response, and develop a comprehensive plan that will serve as a blueprint in the event of a Tornado in the designated area. By focusing on early management and response of a Tornado disaster, this plan aims to ensure the highest level of safety and emergency response for all individuals within the jurisdiction.

### 3. Authorities

- **Emergency Preparedness Coordinator:**
  - Responsible for overseeing the development, implementation, and maintenance of the tornado disaster emergency plan for LLCHD.
  - Ensures compliance with regulatory requirements and coordination with relevant agencies.
  - Facilitates training and drills to enhance preparedness and response capabilities.
- **Incident Command Structure:**
  - Establishes a clear chain of command during emergencies to ensure effective decision-making and communication during emergencies.
  - Defines roles and responsibilities of key personnel involved in emergency response, including:

Role	Responsibility
Incident Commander	Communicate with first responders.
Liaison Officer	Task with transferring communication between other organizations.

Safety Officer	Monitors and addresses safety hazards during response activities.
Public Information Officer	Relays incident related information to public, media, social media, and coordinating with agencies as necessary.

- Relevant Regulatory Agencies:
  - Centers for Disease Control and Prevention (CDC): Provides guidelines and recommendations for waterborne disease prevention and response. Compliance with their directives and requirements is essential for effective emergency preparedness.
  - Environmental Protection Agency (EPA): Sets regulations for water quality standards and oversees water treatment processes.
- State Agencies (Nebraska):
  - The Nebraska Emergency Management Agency (NEMA) is responsible by the State to reduce the number of casualties, communities, and people of Nebraska from damage, injury, and property damage resulting from disasters and emergencies that are either natural, man-made, and technological.
- Local Agencies:
  - Local Health Departments: Collaborate with hospitals to ensure compliance with local regulations and provide support during emergency response.
  - Lincoln-Lancaster County Emergency Management (LLCEMA) is responsible for initiating the continuation of government operations in the occurrence of disaster or major emergency.

#### 4. Definitions and Abbreviations

Term	Definition
<b>The Centers for Disease and Prevention (CDC)</b>	The nation’s leading science-based, data-driven service organization that protects America from health, safety, and security threats, both foreign and in the U.S. <sup>13</sup>
<b>The Department of Health (DOH)</b>	The DOH is a federal executive division responsible for carrying out programs run by the government and policies relating to human health, welfare, and income security. <sup>25</sup>
<b>The Nebraska Emergency Management Agency (NEMA)</b>	Agency responsible for minimizing the number of casualties, communities, and people of Nebraska from damage, injury, and property damage. <sup>4</sup>



<b>Lincoln-Lancaster County Emergency Management (LLCEMA)</b>	Entity responsible for initiating the continuation of government operations in the occurrence of disaster or major emergency. <sup>3</sup>
<b>Waterborne</b>	Carried by or through a body of water. <sup>10</sup>
<b>Runoff</b>	Water from rain, melting snow, or liquid from an industrial or farming process, that flows into water sources such as streams, lakes, and rivers. <sup>10</sup>
<b>Pathogen</b>	A pathogen refers to a biological agent, such as a microorganism or virus, that can cause disease in its host. Pathogens have the ability to invade and multiply within a host's body, leading to various infections and illnesses. <sup>11</sup>

**5. Communications Plan**

**Internal Communication: Emergency Preparedness**

**1. Objective**

The internal communication plan aims to ensure effective communication within LLCHD during the implementation of the Tornado Disaster Emergency Plan addressing tornadoes. The plan seeks to provide clear and frequent updates to all staff members, both first responders and non-first responders, to enhance preparedness, promote understanding, and facilitate a consistent and coordinated emergency response.

**2. Key Messages**

- Importance of Emergency Preparedness: We emphasize the significance of being prepared to address tornado disasters and potential public health impacts by implementing effective measures and developing safe emergency response mechanisms to meet the needs of survivors immediately after a tornado.
- Commitment to Clear Communication: LLCHD is committed to providing clear and frequent communication to all staff members. Transparency, collaboration, and engagement are important for successfully managing tornadoes and natural hazards emergency situations.
- Collaboration and Teamwork: The expertise and input from all the diverse staff members is valued. Collaboration and teamwork across departments is essential to develop a comprehensive tornado disaster management plan and to implement effective strategies for the response.
- Staff Training and Education: Staff training and education is prioritized with the intention to enhance awareness and knowledge about tornado disaster emergency preparedness, evacuation measures, and the proper implementation

of the tornado disaster management plan. By equipping staff with the necessary skills, a consistent and coordinated response is ensured.

### **3. Communication Strategies:**

#### **Internal Communication: Emergency Preparedness Department**

##### **Regular Updates:**

- Blast alert messaging (texts) to all staff members, providing important information, progress updates, and reminders related to the Tornado Disaster Emergency Plan.
- Email Updates: Send blast email updates to all staff members, providing important information, progress updates, and reminders related to the Tornado Disaster Emergency Plan.
- Intranet and Online Resources: Maintain a dedicated section on the intranet with relevant documents, guidelines, protocols, training materials, and FAQs related to the tornado disaster emergency plan.
- Where indicated, ensure that messages are also available to the general public and that messaging is fully accessible for persons with disabilities using a variety of resources.

##### **Training and Workshops:**

- Training Sessions: Conduct training sessions and workshops to educate staff members about tornado preparedness, effective evacuation measures, early warning systems, and the proper implementation of the tornado disaster emergency plan.
- Expert Presentations: Invite subject matter experts to deliver presentations and share their knowledge on natural hazards, tornado preparedness, tornado emergency management and response, and public health disaster preparedness.

##### **Departmental Meetings and Huddles:**

- Departmental Updates: Encourage department leaders to provide regular updates during departmental meetings, addressing specific concerns, challenges, and progress related to preparedness and response to tornadoes.

##### **Recognition and Appreciation:**

- Recognition Programs: Implement recognition programs to acknowledge and appreciate staff members who demonstrate outstanding commitment, adherence to protocols, and active participation in tornado disaster management and emergency preparedness efforts.
- Peer-to-Peer Recognition: Encourage staff members to recognize and appreciate their colleagues' contributions through peer-to-peer recognition platforms or initiatives.

#### **External Communication: Emergency Preparedness**

#### Spokesperson and Message Coordination:

- Designate a single credible and knowledgeable spokesperson to coordinate talking points and ensure consistent messaging across all communication channels.

#### Media Relations:

- Develop press releases and media statements to announce the implementation of the Tornado Disaster Emergency Plan, highlighting the organizations' commitment to patient safety and readiness.

#### Website and Online Presence:

- Update the organizations' websites with dedicated sections on tornado disaster emergency planning and emergency preparedness developments.

#### Social Media:

- Utilize social media platforms to disseminate key messages, share updates on tornado emergency preparedness, and highlight the organizations' proactive approach to residents' safety.
- Engage with followers, respond to inquiries, and provide accurate information and resources.

#### Community Engagement:

- Organize virtual town halls or webinars to address community concerns and provide information on tornado emergency preparedness, evacuation safety measures, and response units.

#### Stakeholder Communications:

- Develop consistent messaging for public communication, ensuring accurate and updated information on tornado disaster emergency management and response.
- Share communication resources/ updates with governing boards, referring physicians, and other stakeholders to maintain collaboration and clarity.

#### Crisis Communication:

- Develop a crisis communication plan to address tornado disaster-related incidents promptly and transparently, providing accurate information and reassurance to the public.

## Mutual Aid Agreement

Mutual Aid Agreements are an essential aspect of Lincoln - Lancaster County's Health Department Tornado Disaster Emergency Plan, which specifically focuses on addressing tornado disasters. LLCHD has entered into a strategic partnership with local, state and federal agencies. Coordination of emergency operations with external agencies such as the Lincoln Police Department, Lincoln Fire & Rescue Department, LLCEMA, etc.

LLCEMA, a prominent disaster emergency preparedness organization based in Lancaster County. This collaboration allows for pooling expertise, health workforce development, and purchasing power; enhancing the health Department's emergency preparedness and response capabilities.

Mutual Aid Agreements aim to establish a cooperative framework between LLCHD and external organizations to ensure effective assistance during emergencies. The agreements encompass the following key elements:

1. **Identification of Partner Organizations:** LLCHD will identify and establish agreements with relevant organizations including first responder organizations, local healthcare facilities, local shelter facilities, state health departments and federal emergency response agencies such as the Nebraska Department of Health and the Federal Emergency Management Agency.
2. **Roles and Responsibilities:** We ensure that every participating organization has a well-defined set of roles and responsibilities, which includes clearly delineated functions and tasks for each entity in emergency situations.
3. **Resource Sharing:** Mutual Aid Agreements outline the types of resources that can be shared among participating organizations. These resources may include personnel, equipment, expertise, and supplies. Procedures for requesting and providing assistance will be established, ensuring a prompt and coordinated response to emergencies related to tornadoes.

These agreements are designed to enhance coordination, resource sharing, and response efforts among various organizations. Some key MOUs and MOAs that LLCHD is part of include:

1. **Nebraska State Patrol (NSP):** Notifications of hazardous events occurring near or in the County could come from the Nebraska State Patrol via direct radio communications or telephone.
2. **Lincoln Police Department**
3. **Fire and Rescue Department**
4. **Lincoln-Lancaster County Emergency Management Agency**
5. **Nearby City Health Department**
6. **County Care & Shelter services**
7. **Regional Healthcare Coalition**

## Concept of Operations (CONOPS)

In the event of a tornado emergency, this tornado disaster emergency plan was created and has been highly customized based on local laws, hazards and response capabilities. Lincoln-Lancaster County Health Department has evacuation and floor plans posted on each floor next to elevators and emergency exits. In the event of a tornado, detailed instructions are thoughtfully placed near windows and doors, ensuring swift and effective responses. LLCHD emphasizes the importance of leaving personal belongings behind when evacuating, and prioritizing safety. The building has easy access to public transportation and the department has the ability to remain fully operational through severe weather. Should a tornado occur, the department will remain vigilant, continuously monitoring conditions and collaborating with other agencies to ensure the safety and well-being of our community. To the extent possible, the same personnel and material resources will be employed in both cases. Day-to-day functions that do not contribute directly to the emergency operation may be suspended for the duration of any emergency. Those departments, personnel efforts will be redirected to accomplish the emergency tasks assigned.

Furthermore, the Emergency Warning Sirens in the City of North Platte and Lake Maloney area are tested at 11:30 a.m. every first Wednesday of the month (301 North Jeffers Street, North Platte, Nebraska 69101).

### 1. Notification

- **Emergency Manager Email:** As soon as the tornado information becomes available, an email is sent to the Emergency managers. The email describes as much of the known situation, and discusses the possibility of in-state activation. Managers are advised that the entire team would be requested to provide their availability soon.
- **All Team Email:** As the prospect of a state of activation becomes more possible, all team members are notified via an email distribution list (ALLFEMA) to contact their managers with availability. Team managers communicate with their disciplines via email and telephone.
- **All Team Page:** When the MEMA Activation is fully authorized, all team members are notified using a paging system. This system sends a text message to each team member's personal cell phone or pager. It should be noted that this system is tested once a week, and all members are expected to report any missed test pages so that they can be corrected.

### MOBILIZATION

#### 2. Preservation of Records

- The preservation of important records and taking measures to ensure continued operation and reconstitution of local government during and after tornado disasters is the responsibility of the executives of this jurisdiction. Normally, the development and

maintenance of procedures for ensuring continuity of government will be carried out for the County by the County Clerk, for Lincoln, Lancaster County by the City Administrator, and for other local jurisdictions by the respective city and village clerks. A system to maintain the most recent revisions, additions, to safeguard essential records, and to recover them should the primary storage be damaged should be in place. Records to be preserved will include as a minimum: a.

- Records protecting the rights and interests of the jurisdiction and its citizens (vital statistics, plats, deeds, tax papers, papers of incorporation, school records etc.).
- Records required by health, fire, law enforcement and public works to conduct emergency operations (utility maps, emergency plans and procedures, personnel lists, construction records, blueprints, etc.) and help assess damage to public infrastructure.
- Records required to re-establish normal government functions and to protect the rights and interests of government (constitutions, charters, statutes, ordinances, court records, financial records, historical records, etc.).

### **3. Evacuation**

- Fire alarms signal evacuation. Staff may also receive specific evacuation instructions over training, email reminders and in some cases, over the intercom during the initiation of the evacuation.
- When you hear the fire alarm or receive intercom instructions to evacuate, evacuate the building immediately in a calm fashion.
- Supervisors evacuate the building last, checking that all subordinates are out of the building and adjoining restrooms.
  - Be prepared to take alternative routes if smoke, fire or other dangers block normal evacuation routes.
- Everyone is to evacuate, including kitchen staff, visitors, and those needing additional assistance such as people with disabilities or short-term mobility issues, and infants and toddlers in the preschool and childcare programs.
- Be prepared to move to an off-site evacuation site if instructed.
- Do not re-enter the building until cleared by the appropriate authorities or your building administrator.
- In life-threatening situations, staff are empowered to deviate from written plans and take independent actions to implement life-saving procedures whenever doing so is likely to reduce the risk of serious injury or death.

### **4. Lightning & Thunder**

- Lightning and thunderstorms are particularly dangerous during a tornado. They can occur while visitors and staff are in the premises during the occurrence of a tornado. All thunderstorms have lightning and require immediate protective measures. Remember the mantra, "When Thunder Roars, Go Indoors!"
- Available weather resources:

- National Weather Service Advisories, Watches, Warnings and Hazardous Weather Outlooks (HWO) can be monitored at [www.weather.gov](http://www.weather.gov).
- Thunderstorms and severe weather forecasts are online at [www.spc.noaa.gov](http://www.spc.noaa.gov).
- Suspend all outdoor and indoor activities and shelter immediately when lightning can be seen or thunder can be heard as well as whenever the tornado is detected. When lightning is detected within 12-15 miles of your activity, alert other staff to direct you to shelter.
- Staff are encouraged to Take Shelter Immediately if they are outside.
- Staff are encouraged to immediately direct everyone to take shelter in a substantial, enclosed building as quickly as possible. Move away from windows and skylights that could be damaged by hail. Stay away from open doors, windows, metal objects, electrical appliances and plumbing during the storm. Do not use showers, whirlpools or swimming pools during thunderstorms. Do not use landline phones.

## 5. Medical Emergency

- If an individual (staff, visitor, etc.) has a Medical Emergency, notify the incident commander immediately.
  - The incident commander will request an immediate call to 911 for an ambulance if:
    - The individual is unconscious or unresponsive for any length of time; or if there are any other serious injury or illness.
- If staff are outside, they are instructed to issue a Reverse Evacuation sending other staff back into the building.
  - Do not try to move an injured patient if he/she has fainted, collapsed, or if it is possible there is an injury to the head, back or neck, unless absolutely necessary for immediate safety. Moving a patient could cause further injury.
  - If the patient tries to move him/herself, encourage him/her to remain still until medical help arrives.
- When appropriate help arrives and takes over, pass on relevant and important information and then rejoin staff, reassuring them that actions are being taken to care for the patient and to protect others. Account for others and remain with them until instructed otherwise.
- All body fluids (blood, vomit, urine, feces, saliva, etc.) have the potential to infect people with serious diseases. Do not attempt to clean up bodily fluids unless you are specifically trained to do so. Notify the building administrator or custodian who has received special training for this.

## 6. Assess the Situation

- When the tornado stops, immediately work to calm yourself and take charge of the situation. Instruct others to hold their position temporarily while you quickly Assess the Situation. There may be broken glass, loose ceiling tiles, blocked or jammed exit doors, or other hazards. Quickly tend to any immediate life safety needs such as extinguishing small fires and helping those who are injured or trapped. Work to safely evacuate and instruct staff to:
  - Watch for hazards and prepare to take alternative routes;

- Help each other since there may be injuries;
- Cover their mouth and nose to avoid breathing in any dust or smoke in the air;
- Stay together and meet at the Designated Area. Affirm them.
  - **Trapped visitors and staff:** If someone is trapped, make a plan for one person to exit while the other stays with the trapped person(s). Be sure to write the names of everyone staying behind to report at the Assembly Area once evacuated.
  - **Supplies:** If it appears safe, try to evacuate with your emergency supplies bucket, and with coats and belongings if people can access them quickly. But don't waste time since another storm could surge.
  - **At the Assembly Area:** Corral everyone together; account for all staff and visitors; report any medical needs, missing persons or other concerns.
  - **Reassure others:** Reassure visitors and staff. This is very important for their immediate and long-term psychological recovery. Gather them together and give them sincere affirmation and hope. Remind them of all the things they just accomplished in order to keep themselves safe. For example, you might say something like this: "We are safe now. Remember all that hard work we've done during our earthquake drills? That really paid off. Think about how well you just did! You protected yourself during the storm. You stayed away from the windows the whole time. You knew just what to do and you did it! You safely evacuated the building, even though we had to take a different route than normal. I saw some of you helping each other and I've heard you encouraging each other. Now we are out of the building and we are safe. I am so proud of you! Now, let's talk about what's next. For some of you, your emergency might be able to come here and get you really soon. But because of the earthquake damage, it will take much longer for most emergency contacts to get here. We are ready for this. We have supplies and we have a plan to take care of you for as long as we need to. But we're going to need to work together. Now, here's what we're going to do first..." If this type of encouragement and affirmation is given immediately after the stress of the earthquake, all of these positives will become part of their memory of the events; which can significantly reduce psychological trauma. It may also improve their coping skills.

## 7. Alternate Operating Locations and Continuity

- Availability, diversity, and redundancy of critical communications and information systems are critical to sustain essential functions performed at alternate locations.
- Telework, mobile work, and work performed from directed work locations may be leveraged to support continuity operations. Employees who participate in the approved telework program may be incorporated into the organization's continuity plan and may be leveraged during tornado emergencies. These are the following spaces that may be used for alternate operating locations.
  - Regional or field offices
  - Remote telework operations
  - Co-location: The organization may co-locate to another organization's facilities or field offices.



## **DISASTER-AFFECTED COMMUNITY NEEDS ASSESSMENT**

As stated in this plan previously, severe tornado and high-wind storms can produce a variety of hazardous weather conditions including high-winds, hail, lightning, and severe rainfall and flash flooding. In 1913, the deadliest tornado in the region occurred. The mitigation phase includes encouraging the construction of tornado shelters in tornado-prone regions and troubleshooting early-warning systems every 2 years by the LLCHD's Emergency Preparedness Coordinator to reduce the effects of a potential disaster and implement robust strategies for mitigating identified hazards.

### **8. Population Vulnerability**

According to the NOAA, each year about 56 people are killed by tornado events.<sup>21</sup> Flying debris is the leading cause of death during a tornado occurrence in flying debris from the high speed winds.<sup>22</sup> Recent studies indicate that mobile and manufactured housing (MH) residents are identified as the most tornado-vulnerable group within the population due both physical and socioeconomic factors.<sup>23</sup> The prevalence of larger MHs has played a role in influencing people when it comes to evacuations and the increased prevalence of mobile homes has increased tornado exposure and associated risks.

Although the entire population of Lincoln, Nebraska is exposed to tornado hazards, teenagers, children, elderly, and disabled individuals are of particular concern as they are considered highly susceptible to the increased risk of injury and fatality resulting from flying debris. Moreover, these vulnerable populations often face financial hardship due to the destruction of their tornado-affected homes, as well as prolonged exposure to power outages and disruptions in business and daily-life operations. While tornadoes result in damage, the most severe ones can propel cars into the air, demolish homes, and transform shattered glass and other debris into deadly projectiles.<sup>24</sup> Accumulations of airborne debris are a human health risk as this debris is carried by the wind and results in the air being polluted with toxic particles. These inhaled toxic pollutants can cause lung damage and cancer. In addition, tornado storm surges can disrupt critical health and emergency services access, elevating the risk for mortality and morbidity. Residents in mobile homes may not have access to housing and their housing is not able to withstand severe wind storms and tornado weather hazards.

### **9. Critical Facilities**

For an effective response during the aftermath of a tornado, critical facilities need to be fully operational. Possible structural harm to disaster responding facilities may include issues on roof structures and building frame damages. Furthermore, these sites might face challenges such as workers being unable to commute, affecting continuity of operations before and after the disaster event. Nonetheless, it is worth noting that LLCHD's MOUs possess the transportation capabilities to reconcile continuity of emergency services before and after the disaster event. As a part of future planning, Lincoln, Nebraska critical facilities may want to explore back-up power inventory and technological updates, for accessible power during a tornado storm.

## **10. Matching Resources to Needs**

In situations where resources and time are constrained, it makes sense to explore strategies for categorizing individuals based on the severity of their conditions. This is evident in the allocation of resources, which is tailored to address the most pressing needs. In the event of a tornado, both limited time and resources will go to those most adversely affected; including FEMA funding. The overarching issue at hand is the designation of Lincoln-Lancaster counties as hazardous zones prone to frequent natural disasters. This classification poses a significant challenge, as it dissuades the federal government from allocating FEMA funding, operating under the assumption that residents in these areas willingly accept the associated risks.

Following a thorough analysis by the Safety Committee, Regional Emergency Planning Committees, Senior Administration, and the Department of Public Health, the Safety Officer meticulously examines both structural and nonstructural elements in the tornado affected area. Subsequently, the Safety Officer provides recommendations to Senior Management, outlining priorities for mitigation strategies related to hazardous materials. Simultaneously, the Facilities Department conducts routine electrical inspections and generator tests to guarantee the seamless operation of the facility's distribution system. This proactive approach ensures an uninterrupted emergency power supply to sockets, particularly those crucially connected to essential equipment, in the event of a tornado.

## **11. Evaluating Effectiveness of Response**

During the recovery phase, the Incident Commander will authorize deactivation of the emergency response. Deactivation activities may include: closing the command post, compiling all tornado response records, and compiling emergency preparedness and management records. A pivotal aspect of this closure is the undertaking of an After-Action Assessment (AAA) within a span of 3 months post-emergency response. The after-action report is implemented to provide feedback after an incident. This assessment is pivotal for discerning areas warranting improvement and refining future response strategies. The main reason for this is to assess and substantiate the effectiveness of the emergency preparedness plan, and to gain insights that can inform subsequent decision-making and resource allocation. This process directly influences the development of future strategies, ensuring robust support for community members preparing for tornadoes and other natural disasters, including the securing of FEMA funding. Effectiveness evaluation is an essential component of program management and evaluation, and it plays a significant role in ensuring that programs are impactful, efficient, and effective in meeting their goals.

## Annex 1: Threat and Hazard Identification and Assessment

Natural	Technological	Human-caused
Resulting from acts of nature	Involves accidents or failures of systems and structures	Caused by intentional action of adversary
<p><b>Tornados:</b> Nebraska is the tenth state with the most tornadoes with an average of 52 tornadoes per year. Eastern Nebraska is part of Tornado Alley, so tornadoes are a common disaster event in the spring and summer months. Tornado events in this area come accompanied by severe thunderstorms, damaging winds and large hail. The Hallam tornado that struck Lancaster County, in 2004, caused significant damage to the area and resulted in one fatality.</p> <p><b>Flood/Flash Flood:</b> There are 6,175 properties in Lancaster County that face a heightened risk of 26% of being severely affected by flooding within the next three decades; which means flooding is likely to impact day-to-day life in the community. Flooding may occur from heavy rains, ice jams and rapid melting of ice, or frequent rains over a short period.</p> <p><b>Severe weather-winter storm:</b> Lancaster County experiences winter storms with heavy snowfall, icy conditions, and bitterly cold temperatures. Storm effects such as extreme cold, flooding and snow accumulation can cause hazardous conditions and hidden problems for people</p>	<p><b>Mass casualty due : to transportation accidents. Vehicular</b> There is a higher frequency of intersection crashes; being the most common at traffic signals and stop controlled intersections. 89% of severe intersection crashes occur at intersections where at least one of the intersecting streets is a major type street and 52% occur at the intersection of two major streets. In the past five years, the City of Lincoln has seen an increase in the frequency of crashes, which mirrors recent population growth and increased travel. From 2012 through 2016, there were a total of 42,552 crashes in the City of Lincoln; a total of 47 fatal crashes and 9,231 crashes that resulted in an injury.</p> <p><b>Train</b> There are rail lines and a rail yard in the County with Union Pacific (UP), Burlington-Northern-Santa Fe (BNSF), and Omaha Public Power District (OPPD) railroads. The BNSF railway currently carries nearly 65 trains daily through northeast Lincoln, resulting in at least 3.5 hours per day that each of the at-grade railroad crossings at N. 33rd Street and Adams Street are blocked to vehicular traffic. These two crossings have one of the</p>	<p><b>Mass casualty:</b> due to intentional: Gang related violence, armed assault, or other intentional interpersonal violence. In May 2023, five women were robbed at gunpoint, causing minor injuries.</p> <p><b>Chemical attack:</b> In September 2023, an explosion inside a shipping container at the largest railyard in western Nebraska, prompted evacuations because of the toxic smoke generated when one of the chemicals aboard caught fire.</p> <p><b>Cyber-attack:</b> The DOH relies on ESAR-VHP and several other programs. However, their limited resources and constrained facilities pose challenges in effectively managing the influx of emergency preparedness information crucial for responding to emergencies. To address this issue, prioritizing the adoption</p>

in the affected area. These storms disrupt daily life and make travel impossible. Long duration of winter storms and cold weather nationally affect the county with pipes freezing, transport shutdowns, hypothermia, and exposure illness.

**Drought:** The Drought Monitor from the University of Nebraska-Lincoln, showed 45% of the state is now in extreme drought or worse, including the western half of Lancaster County and part of Lincoln. 69.2% of people in Lancaster County are affected by drought. Nebraska was ranked fourth-driest state on record in 2022. Rivers are often dried during drought seasons.

**Heat related illnesses** occur in the hot, dry summer.

**Epidemic/pandemic:** Influenza is the most likely, as the Native population is more vulnerable due to lack of continuing protective habits such as wearing masks, social distancing, or other precautions to keep viruses at bay. From the years 2011 – 2019, there was a recorded Tuberculosis outbreak across US prisons; Nebraska was among the affected areas.

Syphilis incidence is rapidly increasing in Nebraska. Since 2017, there has been an overall increase of 373% in Nebraska, a 1,163% increase among

highest exposure ratings and crash rates in Nebraska. There is a possibility for train accidents and derailments.

Latinos and minority populations in Nebraska face significant barriers to accessing quality and culturally tailored healthcare due to their low-income status and lack of insurance coverage, leading to a growing burden of health issues in the community.

Lincoln is the capital of Nebraska and it's the second largest city in the state. The city is home to three large hospitals; playing a vital role in ensuring safety and quality of health. However, the minority population of Lancaster County has increased and the area has a higher percentage of foreign born persons. Over 35% of Hispanic/Latino adults aged 18 to 64 years old do not have a personal physician and one third is uninsured.

**Hazardous materials release**  
The transportation routes of most concern are US Highway 77, Nebraska Highway 2, and the UP and BNSF thoroughfares. All these routes regularly transport a wide variety of HAZMAT materials capable of impacting residents in a derailment. The trains carry agricultural products such as fertilizer, industrial products for heavy manufacturing, and energy products (petroleum and coal).

**Water /land Contamination:**

of contemporary best practices and leveraging technological advancements will be pivotal in achieving this objective.

females, and a 1,100% increase in congenital syphilis. National disparities among Native American and black people are similarly reflected in Nebraska.

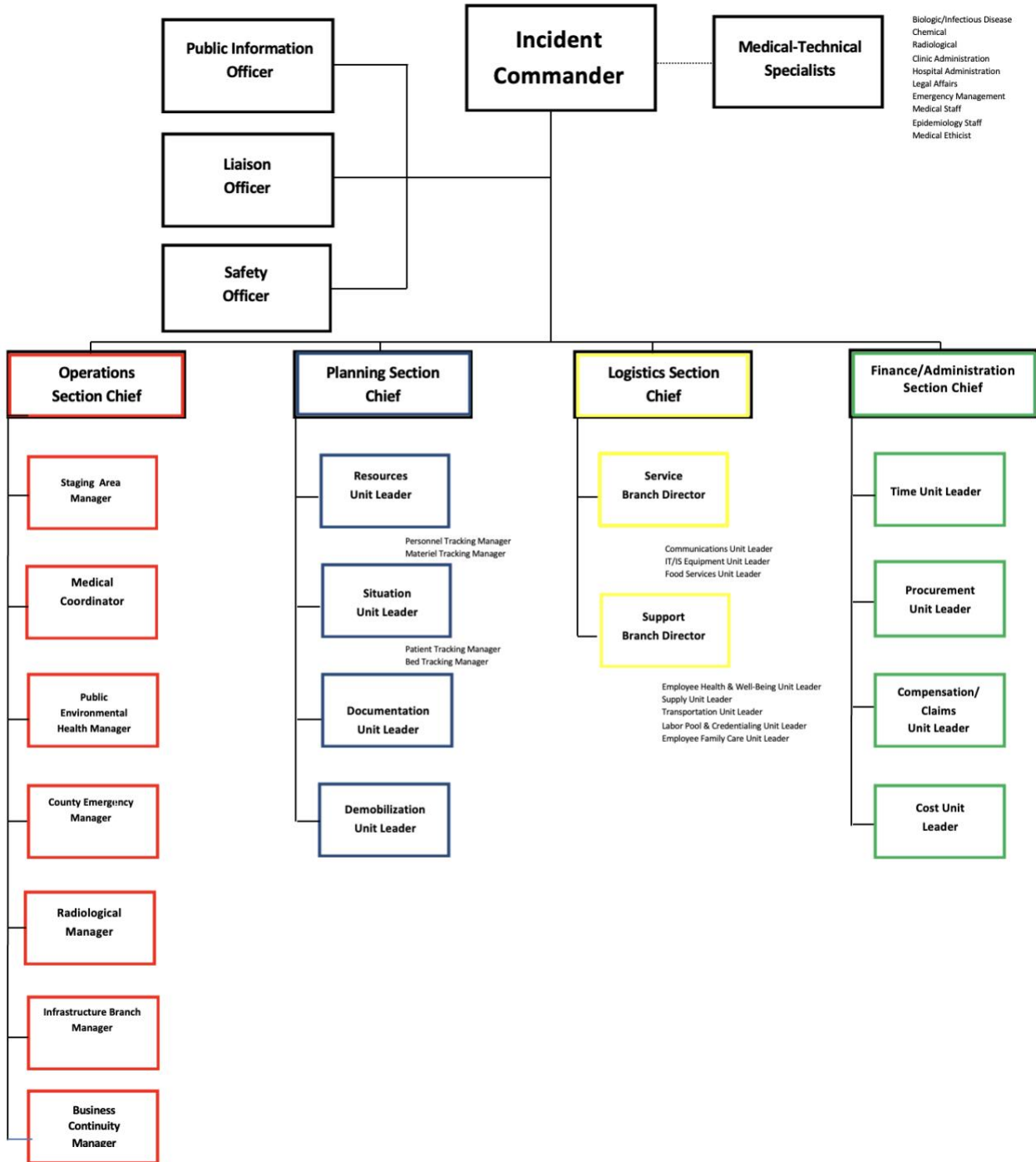
**Metal toxicity**

In February 2022, the ConiTech manufacturing plant spilled 1,000 gallons of flammable liquid in Lincoln, Lancaster County. Consequently, residents residing within a one-mile radius of the plant were instructed to evacuate as a precautionary measure. The long-term consequences of this spill, particularly for individuals reliant on natural water sources for drinking, livestock care, and agricultural activities, remain uncertain, with limited available information on its aftermath.

**Radiological toxicity**

The surrounding areas have natural, mining, and fertilizer released uranium contamination, making the water unfit for people/livestock/farming. A significant number of the population may be exposed to high uranium levels from groundwater sources; the State's groundwater provides drinking water for roughly 85% of Nebraskans. A study confirmed that nitrate, a compound common in fertilizers and animal waste, helps transport naturally occurring uranium from the soil to groundwater. However, there's no testing requirement for private wells – wells not connected to a public water system. So rural Nebraskans who live outside city limits may be unaware if they are drinking water that contains high uranium levels.

## Annex 2: LLCHD Incident Command Chart



**Annex 3: Community Training**

<b>Training Seminar Title: A Training on Tornado Mitigation Basics for Mitigation Staff and Community Members</b>	
<b>Objectives of your Training Seminar (What mitigation strategy are you advocating?)</b>	Tornado Mitigation: A Training on Tornado Mitigation (IS-319.A: Tornado Mitigation Basics)
<b>Estimate Length of Training</b>	1.5 hrs
<b>Target Audience and max size of audience.</b>	Health department staff, public health professionals, first responders, and community members
<b>Who would be a good candidate (e.g., structural engineer, health dept. official, first responder?) as Facilitator of this session? Why?</b>	Emergency preparedness management staff, building managers and safety officers. Mitigation staff, first responders, and community members living in tornado susceptible areas. All community members are qualified to receive training.
<b>What do you want community members to do as a result of their attending this session?</b>	<ol style="list-style-type: none"> <li>1. Create an account/ login to the <u>FEMA: Emergency Management Institute</u></li> <li>2. Reduce tornado disaster risk in the health department and other facilities through tornado mitigation.</li> <li>3. Help health department tornado emergency management programs align with official FEMA information and guidelines.</li> <li>4. Help community members stay informed, educated, and empower staff and community members.</li> <li>5. Expand education by analyzing Official FEMA information, publications, and websites that support the mitigation recommendations made to the public.</li> <li>6. Sign up for emergency alerts.</li> <li>7. Prepare emergency call list.</li> <li>8. Prepare emergency kits for homes.</li> </ol>

<p><b>Strategies to increase community uptake of your mitigation (We have lots of useful links for checklists on the Course Home page under the Important Links page.)</b></p>	<ol style="list-style-type: none"> <li>1. Hand out free educational material about tornado mitigation, high-wind hazards, and safety protocols.</li> <li>2. Show pictures of where to seek refuge before a tornado or high-wind hazard alert.</li> <li>3. Give out ready to complete emergency contact lists, have them complete while in session.</li> <li>4. Distribute free Be-Ready Checklists and emergency supply kits to community members.</li> </ol>
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