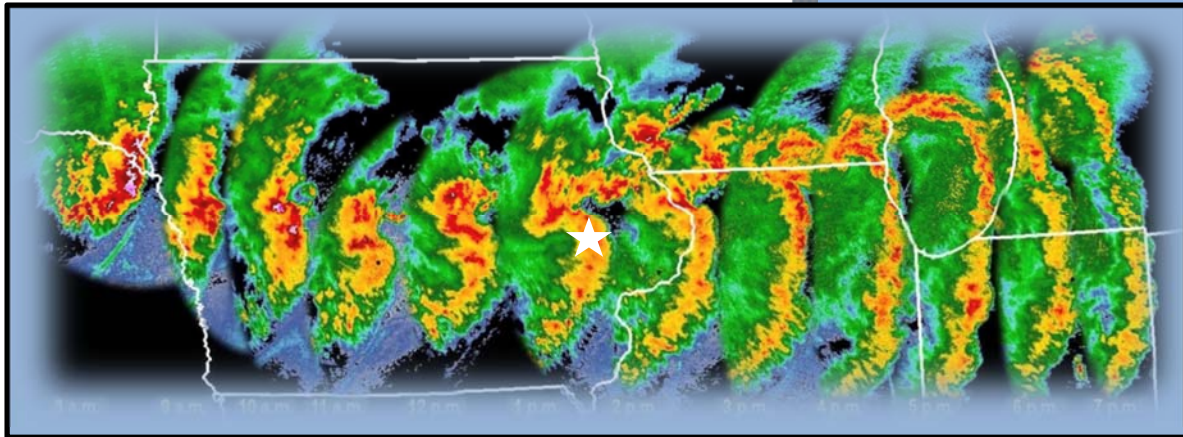




Derecho After-Action Report



August 2020

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Document Intent

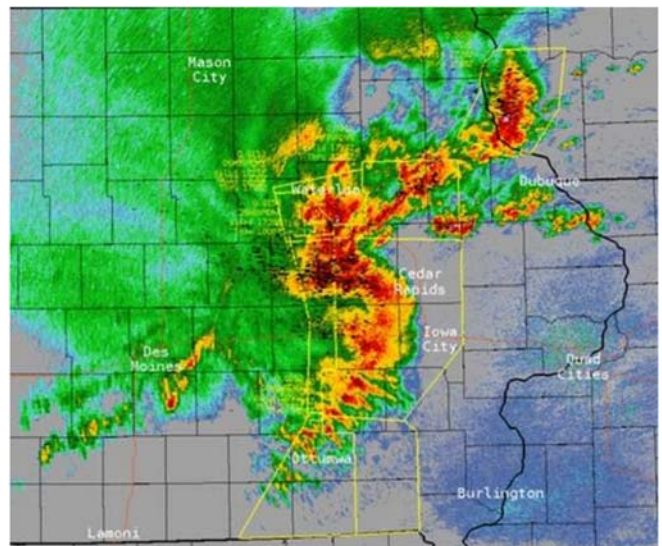
This document is intended to provide a report to the Linn County Emergency Management Commission regarding the response of the agency to the derecho of August 2020. This document is not intended to disparage, demean, or diminish any work that was provided by this agency or our partners. It is intended to provide a learning opportunity for future response and an opportunity for growth of our agency to provide the best opportunity for success in future disasters.

Executive Summary

The Storm and Its Impacts

When the Midwest Derecho passed through Linn County, Iowa on August 10th, 2020, there was already a federal disaster declaration in effect for the COVID-19 Pandemic. The impacts of COVID-19 had altered day to day operations for Linn County Emergency Management Agency (LCEMA). At the time, Linn County Emergency Management Agency had significant resources devoted to meeting the logistical needs for personnel protective equipment (PPE) and other equipment required by response partners throughout Linn County.

On the morning of August 10th, the day's weather outlook included the possibility of severe thunderstorms and very heavy rain. By mid/late morning, straight line thunderstorms were moving east through Iowa with the potential to produce damaging winds predicted to be approximately 70 mph, but no one anticipated the force with which the storm was about to hit Eastern Iowa. The Midwest Derecho passed through Linn County with wind speeds reaching 140 mph. The trail of devastation the Derecho carved across Linn County left 91,000 Alliant customers and 31,000 Linn County Rural Electric Cooperative meters without power, some for as long as two weeks.



The states most affected by the Midwest Derecho included Iowa, Illinois, Minnesota, Indiana and Ohio. This Derecho caused widespread damage to millions of acres of corn and soybean crops across central Iowa. There was also severe damage to homes, businesses and vehicles, particularly in Cedar Rapids, Iowa. Linn County Conservation reported that across Iowa, 724,000 acres of forest were lost. The Midwest Derecho has been the costliest thunderstorm in US history. According to The Washington Post, The National Oceanic Atmospheric Administration estimated the damages at 11.5 billion, which is higher than damage estimates for many hurricanes.



A core component of successful emergency response is continual growth through evaluation and improvement upon response efforts. Linn County Emergency Management Agency response plans are developed according to the National Incident Management System (NIMS), as developed by the U.S. Department of Homeland Security (USDHS). The USDHS defines NIMS as, “a comprehensive, national approach to incident management that is applicable at all jurisdictional levels and across functional disciplines”. FEMA shares the following regarding the importance of NIMS in disaster response:

Every day, jurisdictions and organizations work together to share resources, integrate tactics, and act collaboratively. Whether these organizations are nearby or are supporting each other from across the country, their success depends on a common, interoperable approach to sharing resources, coordinating and managing incidents, and communicating information.

This After-Action Report is intended to recognize and evaluate the hard work of all the agencies who assisted with the Linn County Emergency Management Agency response efforts after the Midwest Derecho in August of 2020. Strengths of the response will be identified, observed issues will be acknowledged, and recommendations will be discussed to identify specific areas of interest for continuous improvement. This document is intended for use and consumption of the Linn County Emergency Management Commission and the report outlines what plans, operations and tactics were used to support all Linn County communities and partners.

As part of the process of continual review and improvement; the evaluation, conclusions, and recommendations presented in this After-Action Report provide a crucial baseline for Linn County Emergency Management Agency. Recommended solutions based upon the lessons learned before, during and after these response efforts; will focus on augmenting

strengths that have been identified, correcting any issues that were noted, and creating improvement plans that will enhance the Linn County Emergency Management Agency's and Linn County's overall strategies for emergency management.

It is our hope everyone in Linn County maintains a commitment to preparedness and dedication to response that will be critical to the success of the community in facing future disasters.

Introduction

In an All-Hazard event, Linn County Emergency Management Agency (LCEMA) coordinates with public and private organizations to support the disaster and coordinate operations and resource priorities. When a disaster or emergency occurs, the LCEMA Coordinator provides coordination and assistance to governing officials of effected municipalities and the County. The emergency management coordinator is appointed by the Emergency Management Commission and delegated the authority to fulfill the Commission's duties, according to Iowa Code, 29C.10. The local Emergency Management Commission is established according to Iowa Code, Chapter 29C.9 to oversee local emergency management functions within each county. The Commission is comprised of a member of the County Board of Supervisors, the sheriff, and the mayor from each city within the county.

One of the responsibilities of LCEMA is to develop and maintain a Comprehensive Emergency Plan for Linn County. Twenty percent of this plan is required to be updated annually, or as needed. The comprehensive emergency plan is tested through exercises involving partner agencies and is reviewed by the local stakeholders. After review, the plan is then approved by the Emergency Management Commission. Successful implementation of the Linn County Comprehensive Emergency Plan depends upon the partnership and cooperation of all involved agencies and relies on their dedication to disaster response.

Core Capabilities

Public Information and Warning

Core Capability as defined by The National Preparedness Goal: Deliver coordinated, prompt, reliable, and actionable information to the whole community through the use of clear, consistent, accessible, and culturally and linguistically appropriate methods to effectively relay information regarding any threat or hazard, as well as the actions being taken and the assistance being made available, as appropriate.

All Linn County Emergency Management Agency (LCEMA) staff were recalled to the Emergency Operations Center (EOC) on the morning of August 10th, 2020. LCEMA staff were present for a National Weather Service briefing at 9:30 AM regarding the potential for severe weather and were standing by to begin monitoring a possible severe storm from the EOC Communication Center. The EOC Communication Center serves as a control point for the indoor and outdoor warning system (siren & 800 MHz radios) for all of Linn County.

From this center, EMA staff are able to monitor all public safety communications channels and have direct communications with the National Weather Service over NAWAS and through NWS Chat.

Watch and Warning Timeline

Starting at 7:23 AM on Monday, August 10th, the National Weather Service in the Quad Cities put out their first situation report. Key points being:

- Severe thunderstorms will be possible across all of Eastern Iowa, Northwest Illinois and Northeast Missouri this afternoon.
- Timing is Noon to 5:00 PM.
- Potential impacts included isolated tornados and very heavy rain.
- Much of Eastern Iowa and Northwest Illinois has been upgraded from marginal to enhanced.
- Confidence: moderate on a line of strong to severe thunderstorms.

Linn County Emergency Management forwarded the National Weather Service information to various public safety partners such as police, fire, EMS, public works, and city administrators.

At 10:00 AM, the National Weather Service conducted a conference call with emergency managers to discuss potential severe storms.

At 11:32 AM, another situation report was put out by the National Weather Service in the Quad Cities. It was titled severe storms expected this afternoon. Key Points being:

- Severe thunderstorms are expected across Eastern Iowa, Northwest Illinois early this afternoon.
- Timing was Noon to 5:00 PM.
- Potential impacts included Damaging winds, isolated winds and very heavy rain.
- Much of Eastern Iowa and Northwest Illinois along and North of Interstate 80 has been upgraded to moderate risk of severe storms.

Linn County Emergency Management forwarded the National Weather Service information to various public safety partners such as police, fire, EMS, public works, and city administrators.

At 11:28 AM, the National Weather Service issued Severe Thunderstorm Watch #426 until 7:00 PM.

Linn County Emergency Management Mass Notification System (RAVEN) notified all care centers, day care centers, and school buildings in Linn County. In addition, the Emergency Management 800-Megahertz radio warning system was used to notify all TV and radio stations, school superintendent offices, hospitals and Law Enforcement Communication Centers. National Weather

Service tone alert radios broadcast this message as well.

At 11:48 AM, the National Weather Service issued a Severe Thunderstorm Warning. Severe thunderstorms were located along the line extending from 7 miles east of Conrad to near Montezuma to near Pella moving East at 70 MPH. Primary hazard included 80 MPH wind gusts.

Linn County Emergency Management Mass Notification System (RAVEN) notified all care centers, day care centers, and school buildings in Linn County. In addition, the Emergency Management 800-Megahertz radio warning system was used to notify all TV and radio stations, school superintendent offices, hospitals and Law Enforcement Communication Centers. National Weather Service tone alert radios broadcast this message as well.

At 12:17 PM, the National Weather Service issued a Severe Thunderstorm Warning until 1:15 PM for Northern Linn County. At 12:16 PM, a severe thunderstorm was located near Hudson moving east at 55 MPH. Primary hazard were 70 MPH wind gusts.

Linn County Emergency Management Mass Notification System (RAVEN) notified all care centers, day care centers, and school buildings in Linn County. In addition, the Emergency Management 800-Megahertz radio warning system was used to notify all TV and radio stations, school superintendent offices, hospitals and Law Enforcement Communication Centers. National Weather Service tone alert radios broadcast this message as well.

At 12:19 PM, the Linn County Emergency Management Outdoor Warning Sirens were activated for all of Linn County.

At 12:34 PM, the National Weather Service issued a Severe Thunderstorm Warning for central Linn County until 1:30 PM. At 12:33 PM, severe thunderstorms were located in a line from Center Point to Ely to near Wellman moving at 70 MPH. Primary threat was 80 MPH wind gusts.

Linn County Emergency Management Mass Notification System (RAVEN) notified all care centers, day care centers, and school buildings in Linn County. In addition, the Emergency Management 800-Megahertz radio warning system was used to notify all TV and radio stations, school superintendent offices, hospitals and Law Enforcement Communication Centers. National Weather Service tone alert radios broadcast this message as well.

At 12:47 PM, the National Weather Service issued a Severe Thunderstorm Warning for Western Linn County until 1:15 PM. At 12:46 PM, severe storms

were located along a line extended from Mt. Auburn to near Amana moving east at 50 MPH. Primary hazard was 70 MPH wind gusts.

Linn County Emergency Management Mass Notification System (RAVEN) notified all care centers, day care centers, and school buildings in Linn County. In addition, the Emergency Management 800-Megahertz radio warning system was used to notify all TV and radio stations, school superintendent offices, hospitals and Law Enforcement Communication Centers. National Weather Service tone alert radios broadcast this message as well.

At 1:28 PM, NextEra Energy/Duane Arnold Energy Center (Nuclear Plant) notified Linn County Emergency Management Agency declaring an unusual event due to storm damage.

At 3:32 PM, the National Weather Service cancelled the Severe Thunderstorm Watch.

Sharing public information on normal media platforms was difficult for a period of time shortly after the Derecho. Delivering reliable information to the whole community at this time in the response effort was crucial. Due to infrastructure outages, TV and radio stations were knocked off line. Broadcast stations were unable to reach their audiences due to the infrastructure loss sustained throughout Linn County. Damaged infrastructure also caused social media and cell service to be unavailable. Radio, social media and cellular services were restored prior to the restoration of television and electricity.



A joint information system was not utilized during the derecho. Instead, individual communities provided their own public safety messaging and press releases. LCEMA worked to synopsize press releases that included information from communities across Linn County and to share this with the affected citizens.

Derecho Communications Report for the Period of 08/10/2020 Through 08/31/2020

Communication Type	Number of Communications	How Communication Took Place
211 Call Center	2,270	Calls Received
Alerts	1	Alert Iowa Message
Facebook	201,912	Acted on by Unique Users
Facebook	110,270	Estimated People Reached
Facebook	123,506	Impressions
Facebook	5,899	Post Engagements
Press Releases	11	Prepared and Distributed
Phone Interviews	1	Given
Radio Interviews	8	Given
Situational Briefings	Multiple	Multiple
Social Media	879	Followers Gained (regular subscribers)
Television Station Interviews	Multiple	Given
Twitter	46,200	Impressions

Situational Assessment

Core Capability as defined by The National Preparedness Goal: Provide all decision makers with decision-relevant information regarding the nature and extent of the hazard, any cascading effects, and the status of the response.

After the derecho passed through Linn County, some members of the LCEMA left the EOC to perform driving windshield assessments. The ability to perform these assessments was severely impacted due to impassible roadways. Roadways were obstructed by downed powerlines, fallen trees and other large debris deposited during the windstorm. Situational assessments allow for the collection of numerical data related to the magnitude of damage caused during a disaster. This data then serves as the driving force for determining the extent of state and federal aid available to the affected region. Due to the obstacles encountered while traversing the geographical area of Linn County after the storm, it was difficult to provide the State EOC with tangible data proving the severity of damage to Linn County after the Derecho. Initial situational assessments would have been more accurate had LCEMA been able to utilize air assets to assess the county-wide damage.

LCEMA developed an operational rhythm in the EOC which supported regular contact with city and county government officials to gather and share situational awareness information. The complete loss of power, internet, and cellular and landline phones negatively impacted LCEMA's ability to initially share situational awareness information through traditional routes.

In the immediate aftermath of the storm, LCEMA was able to gather limited situational awareness information by listening to radio traffic throughout the different communities over the 800-Megahertz radio system. In person EOC briefings were held daily to keep all members of the EOC staff current on response efforts. On August 12th, emergency cellular phones were provided by Verizon, allowing LCEMA to begin holding consistently scheduled Coordination Calls. These briefings included fellow response agencies and community partners. All municipalities were invited to call in for the Coordination Calls as well as Public Health, hospitals, schools, the Board of Supervisors, emergency response agencies, and Linn Area Partners-Active in Disasters (LAP-AID). Briefings included updates on information such as; countywide power outages, long-term burn ban, and lowered protocols for the outdoor warning system to allow for siren usage at lower wind speeds. Beginning August 17th LCEMA began dispersing digital Situational Reports to all participating partners, communities and stakeholders and continued this practice throughout the duration of the event.

The derecho caused extensive damages spreading across the entirety of Linn County. Due to the scope of the affected region each individual community was responsible for damage assessments within their jurisdiction. This proved problematic at times because certain communities were better equipped to track and report those damages than other communities. Providing access to a universal capability such as the ArcGIS Collector App would ensure consistency across Linn County in reporting damages and allow for more efficiency in determining the fulfillment of qualifications to meet individual and public assistance requirements through FEMA.

Operational Coordination

Core Capability as defined by The National Preparedness Goal: Establish and maintain a unified and coordinated operational structure and process that appropriately integrates all critical stakeholders and supports the execution of core capabilities.

The Linn County Comprehensive Emergency Plan is reviewed and approved annually by the Linn County Emergency Management Commission (LCEMC). The LCEMC is made up of the mayors of all incorporated cities within Linn County, the Sheriff, and a member of the Linn County Board of Supervisors. The State of Iowa enforces Iowa Code 29c, which requires that the LCEMC develop and maintain the Comprehensive Emergency Plan and that it be tested through exercises. This plan is maintained and exercises are developed and conducted by the Linn County Emergency Management Agency. Response partners made limited use of the Comprehensive Emergency Plan (CEMP) and Emergency Support Functions. Increasing cooperation with local government partners through pre-disaster collaboration with local officials would further develop familiarity with the Comprehensive Emergency Plan and the benefits it offers to local communities.

According to the Linn County Comprehensive Emergency Plan, the Emergency Operations Center “becomes the central point for coordination and supervision of all emergency operations” (CEMP, p. 23). The CEMP also states that each agency or organization assigned

responsibilities within the plan “will assign a key representative to the Emergency Operations Center Staff. (CEMP, p. 23). At the time of the Derecho, Linn County was already impacted by the federally declared COVID pandemic. This created unprecedented difficulty in staffing the EOC during the Midwest Derecho. The lack of in person liaisons staffing the EOC, led to gaps in communication between county municipalities and the EOC. Creating a county wide Incident Management team trained to coordinate both in person and virtually during emergencies would strengthen the response efforts within Linn County.

FEMA and The Department of Homeland Security have developed national systems to support disaster and emergency response efforts across the United States. The National Incident Management System (NIMS) provides a consistent framework so that different agencies can cohesively work together. NIMS is designed to provide support to local response agencies beyond the resources available in the local Incident Command. The Incident Command System provides a standardized structure creating a hierarchy within which multiple agencies can merge. NIMS and ICS provide for area wide command and control through unified command systems. There was a struggle to unify the community response across Linn County due to the limited use of the Incident Command System.

A decision was made to only staff the EOC with 24 people due to the COVID-19 pandemic. Normally, the EOC would be staffed with up to 80 positions. The EOC was staffed from 8-10-20 to 8-26-20 with approximately 12-14 people each day. EOC Members included EMA staff, members of the State Incident Management Team, Alliant Energy Liaison, Cedar Rapids Incident Management Team, Iowa National Guard, United Way and Salvation Army. The EOC couldn't be staffed by non-governmental organizations and partners due to their own COVID-19 restrictions or policies. The mobile command center with satellite communications was parked outside of the EOC.



Planning

Core Capability as defined by The National Preparedness Goal: Conduct a systematic process engaging the whole community as appropriate in the development of executable strategic, operational, and/or tactical-level approaches to meet defined objectives.

Linn County Emergency Management has a robust suite of plans in place for responding to natural disasters. The Linn County Comprehensive Emergency Plan serves as the base plan

for Linn County and describes how municipalities and their partner agencies interact and collaborate during disasters. As required by the State, twenty percent of the County emergency plans are updated annually or more frequently if State or Federal laws change or if LCEMA becomes aware of the need for a change. The entire suite of plans is updated in rotation every 5 years, ensuring accuracy and compliancy.

A primary area where the county did not have pre-established plans in place was to handle debris management. In the absence of a county wide plan city and county partners effectively developed policies and procedures during the response to handle debris clean up. LCEMA has reached out to all municipalities within Linn County in regards to establishing debris management plans. Templates have been provided and assistance has been offered to the municipalities in Linn County in an effort to aid in the completion of this goal. To date only a small portion of the municipalities within Linn County have submitted completed Debris Management Plans to the Linn County Emergency Management Agency.

Maintaining planning standards was initially difficult because of the shortage of staffing within the EOC. Coordinator O'Konek requested assistance through WebEOC for additional staffing assistance. Members from the State Incident Management Team responded to the Linn County EOC and an additional team member was assigned to support planning efforts. Planning efforts were bolstered with the addition of properly trained personnel familiar with NIMS and ICS.

Logistics and Supply Chain

Core Capability as defined by The National Preparedness Goal: Deliver essential commodities, equipment, and services in support of impacted communities and survivors, to include emergency power and fuel support, as well as the coordination of access to community staples. Synchronize logistics capabilities and enable the restoration of impacted supply chains.

When the Midwest Derecho struck Linn County, the Linn County Emergency Management Agency was already handling the logistics of distributing PPE and other resources requested for the COVID-19 pandemic throughout Linn County. These logistical responsibilities continued throughout the Derecho response and it was necessary for LCEMA to balance these needs amongst the resource requests for the Derecho.

When LCEMA receives a request for a resource, the resource is evaluated and it is determined if LCEMA can fulfill the request with resources that are currently available. If the required resource is not available, then a request is made to the State of Iowa HSEMD advising them of the specific mission or task that is awaiting completion. LCEMA does not have control over what type of resource is sent. Iowa HSEMD selects a resource that can meet the specific mission or task that is awaiting completion and that resource is then deployed. LCEMA will accept whatever resource HSEMD determines to be best to fulfill the need and will then evaluate the resource in cooperation with the requestor to determine if it will be sufficient to meet the resource request. Throughout the Midwest Derecho response,

fifty resource requests and nine generator specific requests were made to State Homeland Security and Emergency Management through WebEOC.

Throughout the response, LCEMA faced several complications which challenged their ability to efficiently fulfill resource requests. Linn County Emergency Support Function 5 defines Emergency Management as “the single point of coordination between member jurisdictions, HSEMD, EOC Operations and the Incident Command Post(s). The channel for requesting assistance from state or federal resources will be through the EOC” (ESF-5, p. 14). One such challenge was due to resources requested through improper channels. There were several instances when Incident Command Posts and elected officials bypassed the Linn County EOC and requested resources directly from the State; including National Guard forces and 5 semi loads of ice. The unexpected arrival of these resources created a state of confusion amongst response agencies. The deployment of resources without proper coordination created undo strain on local organizations already engaged in response operations.

Other challenges included self-deployed resources. Resources sent to a disaster without planning are problematic. These are referred to as self-deployed resources. Self-deployed resources can include; response agencies, volunteers, equipment, food or other materials. These unasked-for resources create complications because they were not planned for and in many cases cannot be utilized. When self-deployed resources arrived during the Midwest Derecho, LCEMA was forced to allot resources that were needed elsewhere to deal with the storage and return of these self-deployed resources that could not be used in the completion of operational missions. Unknown resource needs also challenged the Linn County EOC because several municipalities lacked staff trained in requesting resources through NIMS and ICS. This deficiency in trained personnel resulted in municipalities operating without necessary resources and in municipalities requesting resources through improper channels that bypassed the Linn County EOC.

Infrastructure Systems

Core Capability as defined by The National Preparedness Goal: Stabilize critical infrastructure functions, minimize health and safety threats, and efficiently restore and revitalize systems and services to support a viable, resilient community.

Vast amounts of critical infrastructure were affected by the force of The Midwest Derecho as it passed through Linn County. The majority of Linn County lost power, some areas for as long as 2 weeks. Telecommunication capabilities including; television, internet, cell phones, and landline phones were lost. Radio systems were the only communication service largely unaffected by the storm. In addition to power lines being torn down by winds, they took with them telephone and internet cables in areas where these are located above ground. Cell phone signals had difficulty rerouting because cell towers were blown down by the force of the winds. Roadways were majorly compromised after the storm. Several municipalities had areas within their communities that they were initially unable to respond to due to roadways being blocked by trees and downed power lines. Crews worked for an extended time in all affected communities before streets were cleared of downed lines and broken trees. Citywide

water and natural gas remained largely stable throughout the county. Although, there were limited residences whose natural gas was affected by disrupted feed lines or who did not have the necessary generators to run their well-based water systems.

Despite having measures of redundancy in place the Linn County EOC like others across the county was greatly impacted by the effects of the storm. The Linn County EOC depended on generator power to maintain their operations for approximately 2 weeks after the Derecho. Backup copper phone lines failed to function and did not provide redundancy for phone service as intended during the Derecho response. There was not a plan in place to automatically reroute the VOIP systems. The inability to access television and internet services created a lack of situational awareness within the EOC. LCEMA staff worked to put procedures in place to fill these gaps in communication so that operations could continue as they supported the communities of Linn County.



Numerous private partners that are critical to the community did not have back-up power services in place for the event of an emergency. Many of the buildings that were pre designated as shelter sites within Linn County were not equipped with generators and therefore could not serve as shelters during this disaster. A large number of adult care and assisted living facilities did not have the ability to provide continuous operations for medical equipment. Linn County EOC worked to provide as many generators as possible to these healthcare partners to protect life safety throughout the community

Mass Care Services

Core Capability as defined by The National Preparedness Goal: Provide life-sustaining and human services to the affected population, to include hydration, feeding, sheltering,

Historically, sheltering services have been readily available in Linn County when the need has arisen during emergency situations. Prior to and during The Midwest Derecho, several factors jointly impacted the availability of shelters during this event. Prior to the storm, an equipment trailer containing equipment to provide 100 beds, owned by Public Health and managed by Red Cross, was relocated from Cedar Rapids to Des Moines. The loss of this shelter trailer decreased the County's ability to deploy self-sustaining shelter services – leaving only the Linn County Emergency Management Agency's 50-bed shelter trailer available in the area.

In the immediate aftermath of the storm, LCEMA called upon The American Red Cross to set up shelter services for the communities within Linn County. This created some significant

challenges for Red Cross and LCEMA. At the time of the Derecho, there were 74 locations within Linn County that had been identified by the Red Cross and Linn County Emergency Management as being able to serve as emergency shelters. Due to impacts of the storm, the overwhelming majority of these shelters sustained damage or were without power making them unusable to serve as shelter locations after the Derecho. Volunteer availability was also affected by the storm. A significant number of Red Cross volunteers were impacted by the Derecho and were unable to respond to set up and staff shelters. Impassible roadways and infrastructure damage made volunteer response difficult. Additionally, the Red Cross, like other organizations across the country, had been forced to adapt in order to continue their operations in the face of COVID-19. The American Red Cross' model for sheltering changed as a result of COVID-19 restrictions in a shift away from congregate sheltering to non-congregate sheltering.

At the time of The Midwest Derecho, COVID-19 considerations affected many agencies' policies regarding their operations. Linn County Emergency Management had to modify operational plans based upon these changes and policies. The need to limit public sheltering options created strain on the organizations responsible for sheltering. Agencies worked together to overcome the challenges of COVID-19 restrictions including; damaged buildings, power loss, and scarce availability of volunteers. Linn County EMA's 50-bed shelter trailer was requested by the Red Cross and was deployed to Veteran's Memorial Building in Cedar Rapids. The City of Marion provided emergency shelter at their Main Fire Station immediately after the storm. The cities of Marion and Palo were able to bring in generator power so that they could utilize public sheltering structures within their communities. The City of Marion opened a shelter at Thomas Park on August 10th that housed a maximum of 10 people on August 11th. The City of Palo opened a shelter at their community center on August 14th that housed a maximum of 11 people on August 16th. Veteran's Memorial Building in Cedar Rapids was opened as a Red Cross shelter on August 14th and housed a maximum of 65 people on August 18th. The Red Cross met the remaining sheltering needs in Linn County using hotel rooms to provide non-congregate sheltering alternatives.

The occupancy levels of shelters within Linn County remained well below their capacity limits. ¹ Several factors played a part in the lower-than-expected numbers of people at emergency shelters. Some of these factors included favorable weather conditions immediately after and in the days following the Derecho. In some instances, people who may have had damage to their residence, did not want to leave their homes unsecured and vulnerable. The relatively mild weather after the storm and a functioning potable water system allowed people who would otherwise have required shelter to remain in or near their damaged homes without going to shelters. Many families were taken in by other family members and therefore did not need to relocate to the available emergency sheltering locations. Some people didn't need assistance from Red Cross and relocated out of town to hotels in other cities to find shelter with power and air conditioning. It was noted that a few populations within Linn County were hesitant to relocate to the available emergency shelters due to cultural or historical differences in understanding of what "shelter" means. COVID-19 added to the complexity of sheltering due to the risk that existed in placing citizens together in traditional shelters. Congregate shelter populations and capacities were carefully monitored by EMA and the Red Cross in order to determine the need for more shelters, but the available shelters in Linn

County were not at capacity in the days following the Derecho.

In Response to the 2020 Derecho, Linn County EMA requested LAP-AID to open the Volunteer Reception Center. Volunteer Reception Center staff are specially trained and equipped to register large and small groups of individuals wanting to officially assist after disaster strikes. The United Way assigned two of their staff to the Linn County Emergency Operations Center to work in the volunteer office. One of the challenges of the Volunteer Reception Center was working virtually. Due to the widespread geographical area across Linn County that was affected by the Derecho and the difficulty in publicizing the volunteer reception center at Linn County Emergency Management, in many cases individual communities had to be responsible for tracking their volunteers. The population of Linn County and groups from across the state and country volunteered their time and efforts to help those most affected by the Derecho, but many of these volunteers were self-deployed and untracked.

1. Final shelter capacity data is still being compiled.

Conclusion

We want to recognize the hard work by public safety officials, elected officials, non-governmental organizations, volunteers, church organizations and governmental leaders across the county. The size, scope and complexity of this disaster was unparalleled in Linn County and arguably the State of Iowa. We are grateful for everyone's work during the Derecho of August 2020. This agency stands ready to assist any community in partnering with ways to improve disaster response.

Each disaster is unique to itself and provides everyone an opportunity for learning and better preparedness. As we move forward, it will take time to fully implement the improvements we recognize to be made. We are committed to moving thoughtfully and intelligently through these improvements. This work may take months or even years to complete and fully implement. Additionally, some of these lessons learned may require expenditure of funds to meet the gap(s) identified.

Observations and Recommendations

1. Public Information and Warning

Observation #1:

- ❖ Despite National Weather Service Warnings, activation of the Outdoor Warning Sirens, and social media posting some portions of the community were still unaware of the impending storm.

Recommendations:

- Upgrade the capability of the outdoor warning system to be utilized for real time voice public information over each siren to provide emergency specific information.

Observation #2:

- ❖ It was difficult to coordinate the broadcasting of public information messages early during the response because of the loss of power, internet and cellular coverage to much of the county.

Recommendations:

- Provide messaging to a more wide-spread audience by producing press conferences directly from the EOC that can be shared directly with the communities of Linn County.
- Provide message on multiple platforms including social media to enhance the reach of these messages and archive the message on YouTube for easy community access.
- Initiate a regularly scheduled daily briefing for the county that will provide community specific information from all community leaders who wish to participate.

Observation #3:

- ❖ There was not a consistent public information message provided across all municipalities within Linn County.

Recommendations:

- Partner with other communities to ensure the messaging in times of disaster is accurate, timely and to the point.
- Utilize a Joint Information Center to collect, coordinate and disseminate a cohesive message to the residents of Linn County.
- Consider a Standard Operating Guideline for the more robust utilization of the 800-MHz radio system during times of communications blackout.

Observation #4:

- ❖ It was difficult to provide the public with up-to-date emergency notifications.

Recommendations:

- Continue to promote the new Alert Iowa system, participants can connect with us by going to our website www.linncounty-ema.org, finding the Alert Iowa logo, and signing up for alerts.
- Individuals can also text LINNIA to 672-83 on a smart phone to sign up. Previous Alert Iowa users will need to re-register. You can also download the Smart911 app. It is free and available for iOS and Google based phones.

2. Situational Awareness

Observation #1:

- ❖ Not all situational assessments can be completed utilizing data collection from the ground.

Recommendations:

- Contingency plans need to be created to account for events in which situational assessments cannot be completed from the ground and instead must involve air assets.
- MOUs should be put in place with aircraft companies to ensure availability of aircraft during times of disaster.

Observation #2:

- ❖ Communication lines at the Linn County EOC did not provide the redundancy that was expected.

Recommendations:

- Redundancy measures need to be updated and expanded to provide better backup coverage in the event of loss of main communications.

Observation #3:

- ❖ Messages broadcast to the public through private media sources did not include all pertinent information necessary for the safety of Linn County communities.

Recommendations:

- In working to improve our Joint Information System (JIS) to better provide critical disaster information to the community, LCEMA has purchased equipment to record and distribute in-house public information and press releases free from reliability on traditional media.

- Continue to invite our partners to regular update briefings during a disaster response and look at ways to improve messaging to the community when traditional forms of communications fail or are severely degraded by a disaster.

Observation #4:

- ❖ Community reporting of damages was unreliable and it was found that certain communities did not have equal capabilities for reporting damages.

Recommendations:

- Facilitate ensuring the availability of the Collector App to all municipalities within Linn County.
- Consider offering Pre-Incident Training and/or Just in Time Training.

3. Operational Coordination

Observation #1:

- ❖ Community leadership was not familiar with the countywide Comprehensive Emergency Plan.

Recommendations

- Increase cooperation pre-disaster, with local municipalities and emergency response agencies to ensure a county wide understanding of the benefits of utilizing the Comprehensive Emergency Plan.
- Offer government officials, quarterly training on the Comprehensive Emergency Plan.
- Encourage municipalities to mandate regular review of the County’s Comprehensive Emergency Plan and Iowa Code 29c for all policy makers and government leaders.

Observation #2:

- ❖ Lack of partners present in the EOC led to gaps in communication.

Recommendations:

- Work to better utilize virtual option for EOC collaboration during events such as the COVID pandemic.
- Consider cross training to help cover short falls in EOC staffing and create EOC training drills involving minimum staffing of 24 out of 80 positions, maintaining 6 feet separation to include

working virtually.

- Create a Linn County Incident Management Team with members from each municipality that can respond to the EOC (in-person or virtually) to assist during disasters.

Observation #3:

- ❖ National Incident Management System (NIMS) and Incident Command System (ICS) were not effectively utilized throughout the County response.

Recommendations:

- Require government officials to take FEMA Independent Study courses on NIMS and ICS.
- Promote standardized NIMS and ICS training including FEMA IS courses for all city and county workers in alignment with the County-approved operation plans.
- Provide training opportunities with government officials and response partners that highlight the use of NIMS and ICS.
- Strengthen our work and partnerships with our Linn County governmental agencies, cities, and other agencies by reaffirming our role in disasters and by researching and providing training for response agencies and community leaders across Linn County.
- Continue to look for training, exercise, and drill opportunities to practice disaster response to improve everyone's ability to respond as quickly as possible when disaster strikes. Plans for future training drills are still being developed.

4. Planning

Observation #1:

- ❖ Most municipalities within Linn County did not have debris management plans in place.

Recommendations:

- LCEMA has reached out to all municipalities within Linn County regarding the importance of creating a debris management plan and templates to assist with the process have been provided as requested.

Observation #2:

- ❖ There was not a predetermined response plan to ensure that additional NIMS and ICS trained personnel would be available (in-person or virtually) to assist with the Planning Emergency Support Function within the EOC.

Recommendations:

- Provide training opportunities with government officials and response partners that highlight the use of NIMS and ICS.
- Create a Linn County Incident Management Team with members from each municipality that can respond to the EOC (in-person or virtually) to assist during disasters.

5. Logistics and Supply Chain

Observation #1:

- ❖ Resources were requested through improper channels bypassing the Linn County EOC.

Recommendations:

- Collaborate with the State EOC to clarify and enforce use of the proper channels for resource requests.

Observation #2:

- ❖ Self-deployed resources arrived without any formal request.

Recommendations:

- Provide training to government and public officials on resource and donation management.
- Create a pre-recorded press release that can be broadcast during times of disaster, that can be released to the community addressing self-deployed resources, the difficulties they cause, and how to contact the Linn County Emergency Management Agency if they wish to assist with the emergency.

Observation #3:

- ❖ Some municipalities operated without required resources because they did not know how to make a request for the needed assistance.

Recommendations:

- Provide training to all municipality personnel on the resource request process, including formal request processes and the use of ICS Form 213RR

6. Infrastructure Systems

Observation #1:

- ❖ Backup phone lines did not function as expected and were not robust enough.

Recommendations:

- Linn County IT is in the process of securing a new contract for landline phone services.
- Research contracting an additional backup provider of landline phone services
- Evaluate a satellite phone link for the EOC.

Observation #2:

- ❖ VOIP systems were not rerouted.

Recommendations:

- Linn County IT is already working to correct this system wide issue.

Observation #3:

- ❖ There were no redundancy measures in place for television and internet access.

Recommendations:

- Look into the capability of using the Mobile Command Center's satellite dish to provide back-up internet access if necessary.
- Looking into a roof top antenna and a satellite system to provide additional television access.

Observation #4:

- ❖ Private partners with vital roles in the community were not prepared to sustain operations without power.

Recommendations:

- Encourage continuity of operations planning amongst private businesses throughout Linn County, specifically focusing on healthcare and emergency services.

7. Mass Care Services

Observation #1:

- ❖ The need for more, Red Cross sponsored congregate shelters. A more Comprehensive list of specific shelter capabilities for each shelter.

Recommendations:

- Enhance the 50 bed Linn County mobile shelter trailer with additional equipment and load plan.
- Obtain an updated call out list from Red Cross every 12 months.
- Reorganize Linn County Community Emergency Response Team (CERT) members to take Red Cross training in Shelter Operations/management to immediately set up, organize and open a congregate shelter until Red Cross staff arrive allowing CERT Team members to transition out.
- Re-invigorate the Community Emergency Response Team (CERT) and establish a volunteer corps to assist LCEMA in times of disaster. Increased human resources will help LCEMA better meet the needs of disaster response and recovery.
- Utilize volunteers to provide enhanced logistical response, assist our Red Cross partners with shelter operations, and provide Point of Dispensing (POD) operations to meet the immediate needs of the community.
- Work with our Red Cross Partners and local schools and businesses to update our shelter list to ensure access to abundant congregate space that can be set up quickly and effectively for those in need.

Observation #2:

- ❖ All public agencies must continue to reach out to populations across our community, particularly those with cultural or historical differences, language barriers, and special needs so they are aware of the assistance available to them in disasters.

Recommendations:

- Take advantage of outreach opportunities, such as providing an informational booth at the Linn County Fair and partnering with any agency for disaster preparedness by

providing informational presentation to community groups to provide a better understanding to the public of what Linn County Emergency Management Agency does to support our communities. Support includes and is primarily focused on coordinating access to and acquiring resources during disaster response such as shelter, food, alternate power, etc.

Observation #3:

- ❖ Problems with coordination of, acquisition, and distribution of food/meals to points of dispensing (PODS) operations and logistics.

Recommendations:

- Consider forming a permanent emergency food/feeding taskforce operating out of the EOC.
- Consider developing Standard Operating Guidelines for the emergency food/feeding taskforce.
- Establish a POD unit that works with the food feeding task force to deal directly with logistics and operations.

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