

*Iowa Department of Homeland Security
and
Emergency Management*

*Derecho 2020
After-Action Report/Improvement Plan (AAR/IP)*



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ADMINISTRATIVE HANDLING INSTRUCTIONS

The title of this document is ***Iowa Department of Homeland Security and Emergency Management Derecho 2020 After-Action Report/Improvement Plan (AAR/IP).***

Point of Contact:

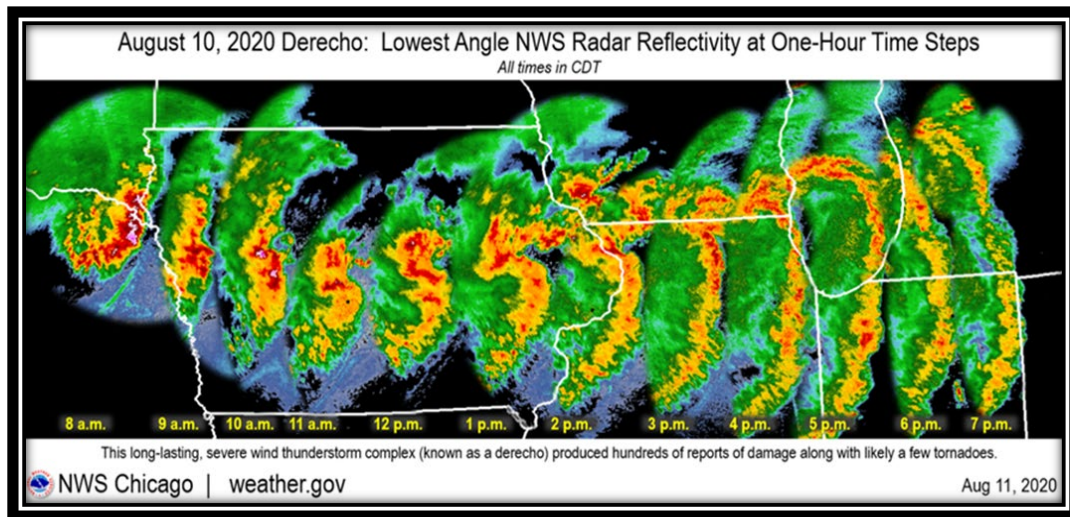
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EXECUTIVE SUMMARY

Aug. 10, 2020, proved to be one of the most complex disasters the state of Iowa has experienced. A powerful line of severe thunderstorms, known as a derecho, tracked through the state producing sustained hurricane-force winds. The magnitude and severity of the impacts and border-to-border damage across 26 counties led to the request for a presidential major disaster declaration. On Aug. 17, 2020, a presidential major disaster declaration was granted and officially designated by FEMA as Severe Weather DR-4557-IA.

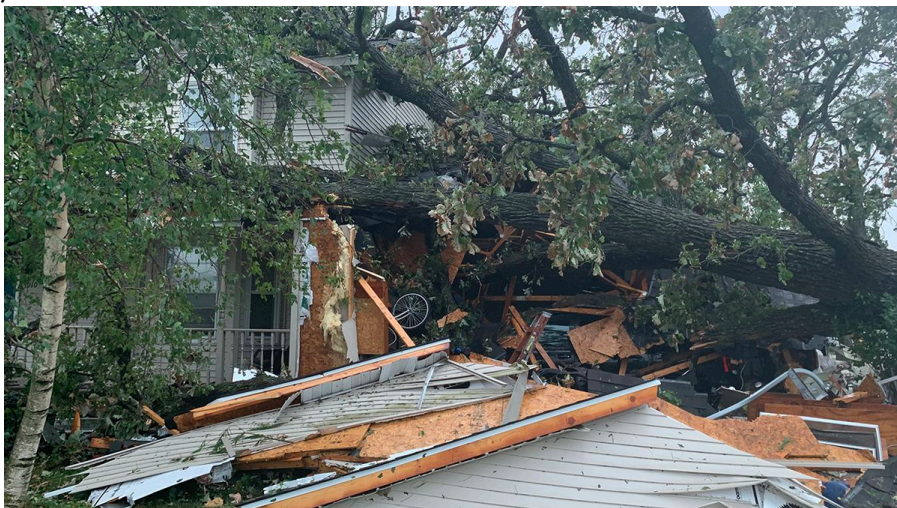
The National Oceanic and Atmospheric Administration (NOAA) estimated a total loss in all states in the derecho's path at \$11 billion. The Washington Post published a \$7.5 billion figure for Iowa damage, which was attributed to information from NOAA. According to



FEMA records, \$325 million in aid will be provided to local governments and homeowners in Iowa for this disaster. The United States Department of Agriculture estimates 1 million acres of corn and 660,000 acres of soybeans were destroyed. Approximately 100 million bushels of on-farm and commercial grain storage were lost. There was \$230 million in damage to electrical transmission systems across Iowa.

Major themes identified within this AAR/IP include:

Relationships fostered by HSEMD across all levels of government and the public/private sector partnerships was a major area of strength. Participants echoed the appreciation of the trusted relationships that have been built over the years, which ultimately led to an all-hands approach.



Coordination and Communication: With well-established State Emergency Operations Center (SEOC) operations processes in place, HSEMD personnel understood expectations, began proactively leaning forward in response actions, and navigated difficult barriers such as power outages, cellular disruptions, and extensive debris impact in communities.

Situational Assessment: HSEMD's public information team is experienced and has developed good working relationships and well-practiced processes. HSEMD has opened the SEOC to private-sector partners during disaster response to quickly gain additional insight, knowledge, and situational awareness. Technology used for situational awareness, such as WebEOC, was found to be both useful and cumbersome by State agencies and county emergency management agencies.

Plans, Policies, and Procedures: Well-established plans and processes were challenged and new ones were rapidly developed during the disaster response. The efforts of HSEMD preparedness programs over the years that have addressed the development, implementation, and validation of both State and local emergency response and recovery plans were positively reflected in the response efforts on all levels of government. When the magnitude of debris was identified, State partners quickly came together to procure and contract through a State master agreement for debris contractors and associated debris monitoring services. These contractors and service providers had capabilities to process the volume of debris across the impacted areas at rates that ultimately saved State and local governments millions of dollars.



Identified Strengths

Despite the catastrophic impacts the derecho brought to Iowa, the event highlighted areas of the response that should be noted as strengths and highlighted collaborative processes among the various local, State, federal, and private-sector partners. A summary of the strengths is listed below, with a more thorough description provided in the observations section of this report.

1. Operational Communications/Coordination

- 1.1. Collaboration between HSEMD personnel, State agencies, private-sector partners, and local emergency management aided in overcoming identified gaps.
- 1.2. The SEOC took proactive measures to identify and support coordination efforts.
- 1.3. Representatives from various agencies committed to being in person within the SEOC to better coordinate the response to the derecho amid the height of the COVID-19 pandemic.
- 1.4. HSEMD personnel supporting the response to the derecho were knowledgeable in their areas of responsibility.

2. Debris Management

- 2.1. HSEMD and State partners came together quickly to execute State master agreements and to obtain debris specialists and associated monitoring services to process the volume of debris across impacted areas.
- 2.2. HSEMD effectively coordinated a timely response of personnel and equipment to begin debris clean-up across the state.

3. Situational Assessment

- 3.1. HSEMD, State agencies, private organizations, and local emergency management agencies recognized the challenges and worked together to gather and provide information.
- 3.2. HSEMD opened the SEOC to public/private partnership personnel, volunteer organizations, and independent utility companies to allow for maximum coordination and an enhanced ability to provide vetted information through their subject matter experts.
- 3.3. WebEOC was utilized as the consistent method of technology for situational assessment and coordination within the SEOC and among partners.

4. Logistics/Resources

- 4.1. HSEMD was able to successfully secure, assign, and deliver resources based on requests made, even though there was an absence of perfect information due to communication challenges.
- 4.2. HSEMD quickly coordinated pre-staged resources such as generators and ice trucks, providing needed services for local jurisdictions and private-sector partners.

5. Mass Care Services

- 5.1. HSEMD personnel brought partners together to create solutions and fill gaps as they were identified.

Opportunities for Growth

There are always opportunities for growth in any response. Participants from State agencies, local governments, and private-sector partners identified areas that, if improved, would increase effectiveness, provide a stronger common operating picture, and enhance the efficiency of coordination and communication efforts. It is important to understand that the opportunities for growth listed below and found in the observation section did not prevent the State of Iowa from accomplishing missions, but did present challenges that can be overcome with additional planning priorities, training programs, and exercises to validate processes. The areas of improvement recognized during this event are summarized below.

Operational Communications/Coordination

- 1.1. The State needs to identify an alternate process for obtaining situational awareness from county emergency operations centers (EOC) during long-term, widespread power outages and disruptions to communications.
- 1.2. Local emergency management faced limitations for staffing their emergency operations centers and uncertainties about roles and responsibilities, expectations, and processes.
- 1.3. Some communities did not get necessary warnings for the imminent storm and timely information following the storm to make informed decisions.
- 1.4. Coordination, communication, and collaboration between local emergency management, the SEOC, and the Red Cross was strained.
- 1.5. Information sharing and the partnership between cellular service providers and the SEOC could have been improved.

2. Debris Management

- 2.1. Some local emergency management faced limitations related to understanding the overall debris management process and the associated expectations.
- 2.2. HSEMD and partners that established the State debris master agreement contract need to refine the process and provide clear guidance and expectations for the program for future disasters.
- 2.3. Coordination of debris management guidance between the State and local emergency management needs to be consistent and improved.

3. Situational Assessment

- 3.1. There were difficulties in gaining rapid understanding of needs and vulnerabilities during the initial phase of the response.
- 3.2. HSEMD's incident management software, WebEOC, wasn't used by some local emergency management during the response, which limited information sharing.
- 3.3. The SEOC needs to develop a quality control process for situation reports.
- 3.4. The SEOC needs to review the process for ensuring partnering organizations' contact information is updated and accurate.
- 3.5. Engagement and education of the disaster process with local communities, elected officials, and whole community partners could be improved.

4. Logistics/Resources

- 4.1 HSEMD should review and support local emergency management agencies' education and implementation process and emphasize to all stakeholders within the whole community the formal resource request process.
- 4.2 The SEOC's coordination and communication process for pre-staging resources and pushing resources to county emergency management agencies needs improvement.

5. Mass Care Services

- 5.1. Coordination with refugee and immigrant populations needs improvement.
- 5.2. A formalized food safety process during disasters needs to be developed.
- 5.3. Coordination between the SEOC and sheltering partners could be improved.
- 5.4. The State disaster case management system should be reviewed and refined.

EVENT SUMMARY

On Aug. 10, 2020, in the midst of a global pandemic, with restrictions including shuttered businesses, remote working, mask mandates, social distancing, travel restrictions, and closures across the world, Iowa was impacted by a derecho. The derecho, which is a line of intense, widespread, and fast-moving windstorms characterized by damaging winds, produced hurricane-force wind speeds in excess of 75 mph, including gusts up to 140 mph.

The storm proved to be one of the most complex disasters the state has experienced in years. This event presented a complex incident environment with a magnitude and severity that spanned many counties with border-to-border damage. Cascading impacts were additionally challenged by communication system interruptions, extended power outages, and historically high debris volumes.

Major Impacts include:

Power & Communications	<ul style="list-style-type: none">• Over 585,000 customers affected by outages, some lasting up to two weeks• Over 444,000 wireless customers affected by disrupted services• \$230 million in damage to electrical transmission systems
Infrastructure & Debris	<ul style="list-style-type: none">• Over \$100 million in damage to public infrastructure• Over 8,000 homes severely damaged or destroyed• More than 6 million feet of wire replaced• Tens of thousands of utility poles downed• Debris removal exceeded \$186 million (not including private sources/insurance)
Agriculture	<ul style="list-style-type: none">• USDA estimated 1 million acres of corn and 60,000 acres of soybeans destroyed• Roughly 100 million bushels of on-farm and commercial grain storage lost

The SEOC was activated on Aug. 10, 2020, immediately following the storm passing through the greater Des Moines area. As the storm increased in intensity as it moved across Iowa, county emergency management agencies, first responders, volunteers, and State agencies were activated to respond to the devastation. The SEOC was activated through Aug. 26, 2020, and completed 298 missions. State agencies and utility organizations, along with the Iowa Utilities Board, were coordinating operations from the SEOC. The recovery process began as response efforts were occurring and continues today.

Iowa Governor Kim Reynolds signed a proclamation of disaster emergency on Aug. 10, 2020, and requested a presidential major disaster declaration on Aug. 16, 2020. The request was granted by President Trump on Aug. 17, 2020, and assigned disaster number DR-4557. In total, 23 Iowa counties were included in the presidential major disaster declaration.

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EVENT TIMELINE

Date:	Summary of Events:
Aug. 10, 2020	<p>The derecho tracked across Iowa from mid-morning through the afternoon.</p> <p>The SEOC was activated due to the widespread damage that was reported throughout Iowa.</p> <p>Power outages throughout the path of the storm were reported and cellular services were significantly disrupted.</p> <p>Gov. Reynolds signed a disaster proclamation.</p>
Aug. 12	Generators were pre-staged in multiple locations.
Aug. 13	HSEMD operations staff coordinated with the Cedar Rapids National Guard Armory to set up feeding services.
Aug. 14	<p>The Iowa Department of Transportation had already completed 33 missions.</p> <p>Four semi-trucks arrived in Linn County with ice.</p>
Aug. 16	Gov. Reynolds made a request for a presidential major disaster declaration.
Aug. 17	A presidential major disaster declaration was granted for 16 counties.
Aug. 19	The Department of Administrative Services issued a RFB for a debris management contract.
Aug. 20	President Trump approved Gov. Reynolds' request for funding under the FEMA Individual Assistance Program for Linn County.
Aug. 21	<p>Gov. Reynolds requested a USDA secretarial disaster designation for 57 Iowa counties.</p> <p>A mass care task force was formed to support feeding and housing.</p>
Aug. 26	<p>298 mission requests were received by SEOC.</p> <p>4,662 Iowans had registered for FEMA Individual Assistance.</p>

Figure 1.1 Mission Completed by Assignment in WebEOC

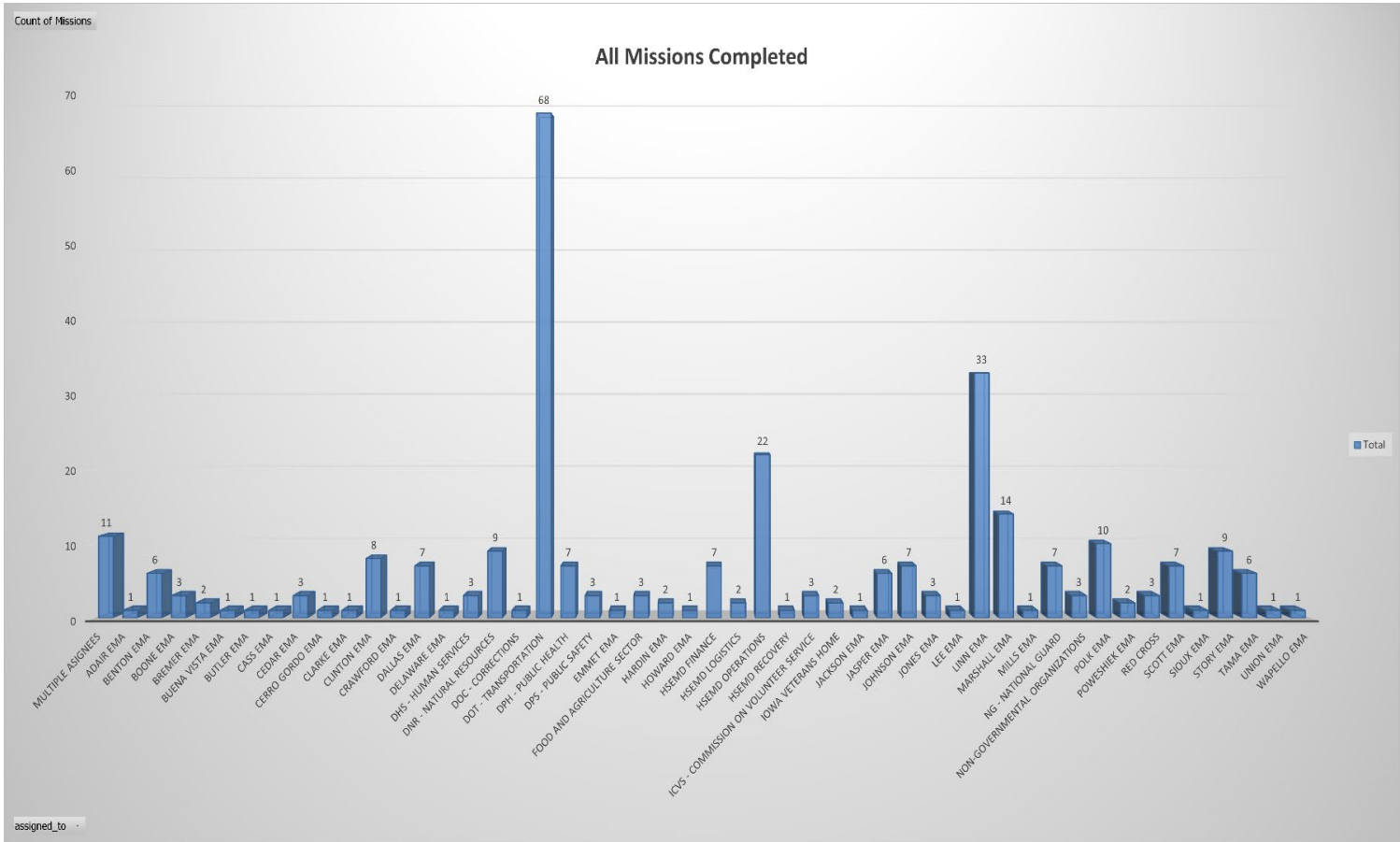


Figure 1.1 results come from WebEOC log and include all 299 missions captured for the derecho.

Figure 1.2 Missions by Requesting Agency

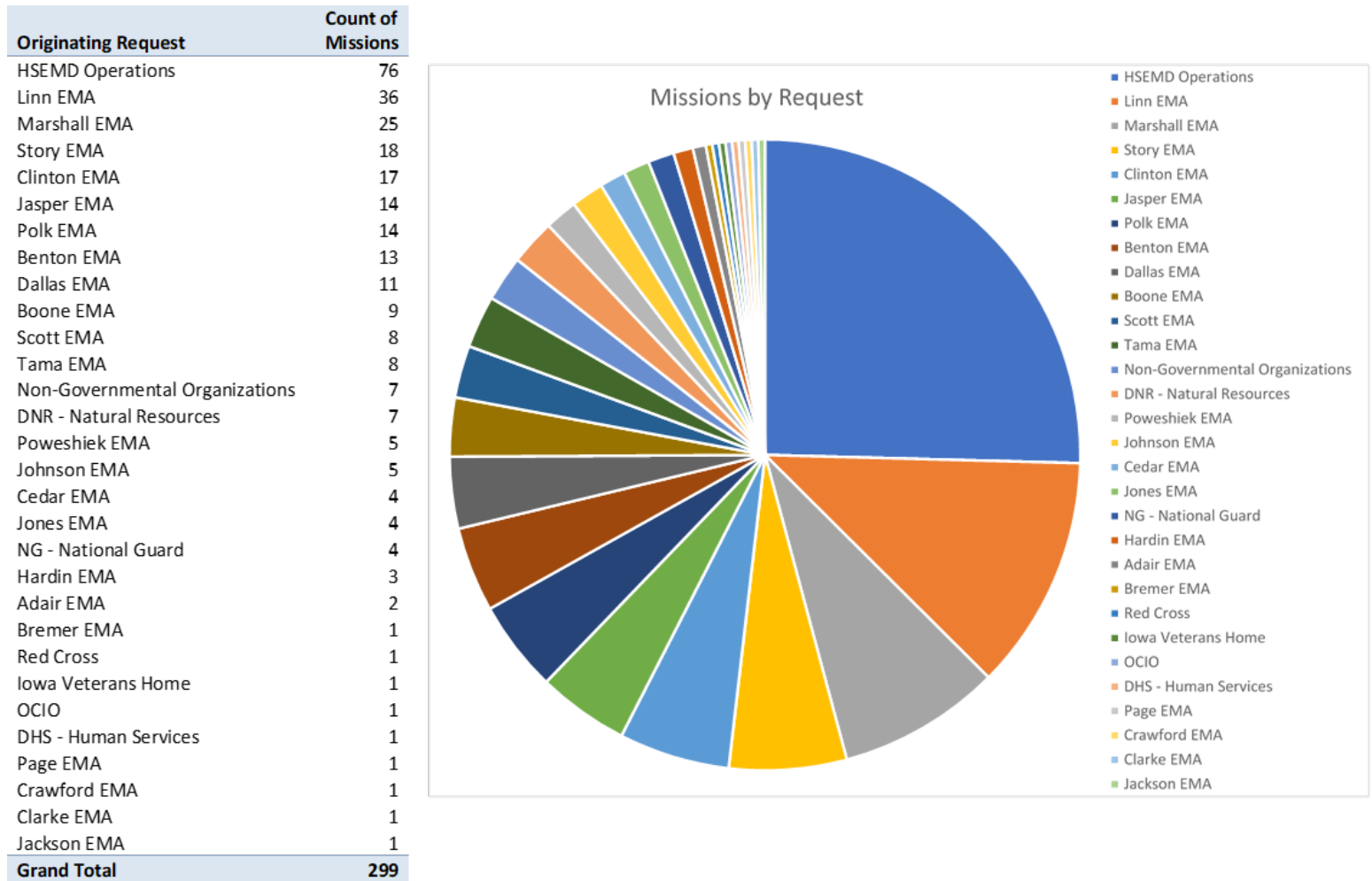


Figure 1.2 results come from WebEOC log and captures the number of missions by requesting agency.

OBSERVATIONS/ ANALYSIS OF FINDINGS

This After-Action Report/ Improvement Plan is intended to provide a review of the response to the Aug. 10, 2020, derecho for the Iowa Department of Homeland Security and Emergency Management. This report was developed by executing a multi-step process to collect data within the framework listed below:

- ✓ A review of response actions taken from Aug. 10 through Aug. 25, 2020
- ✓ Interviews with stakeholders representing State agencies, county emergency management agencies, and private-sector partners
- ✓ Research from reputable reporting agencies providing storm details and the impacts of the derecho
- ✓ Evaluation of the interaction, coordination, and relationship between the SEOC and the 26 county emergency management agencies impacted by the derecho
- ✓ Evaluation of the interaction, coordination and relationship between State agencies involved in the response at the SEOC

The following are observations captured during the data collection process and from requested feedback.

1. Operational Communications/Coordination

Strengths

Strength 1.1: Many positive partnerships have formed within the SEOC. Collaboration between HSEMD personnel, State agencies, private-sector partners, and local emergency management to overcome gaps was identified as a strength.

Analysis: Over the years great working relationships and familiarity with a multitude of organizations has been established and maintained that have strengthened the coordination within the SEOC. This has led to a stronger understanding of how processes work within the SEOC and has enabled positive interactions and joint decision-making processes to work effectively. Maintaining a physical presence in the SEOC during this event enhanced communications and contributed to trust and confidence in the State's abilities. With the pandemic activation already underway, agencies were poised and ready to receive information for the derecho. Partners were willing to work together to overcome the challenges and find solutions. Public/private partnerships enhanced resource requests and expedited assets to meet critical needs.

Strength 1.2: The SEOC took proactive measures to identify and support coordination efforts.

Analysis: As the derecho moved across the state, coordination efforts immediately began with counties first impacted by the storm. Experienced SEOC personnel were able to quickly identify and proactively begin coordination efforts to prioritize power restoration, ice trucks, and debris management resources.

Strength 1.3: Representatives from various agencies committed to being in person within the SEOC to better coordinate the response to the derecho amid the height of the COVID-19 pandemic.

Analysis: When the impacts of the derecho became clear, representatives committed to being present in the SEOC (socially distanced and properly masked) to effectively communicate and coordinate the response.

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Strength 1.4: HSEMD personnel supporting the response to the derecho are knowledgeable of their areas of responsibilities.

Analysis: Many HSEMD personnel and other representatives within the SEOC have years of experience responding to real-world disasters and understand not only their roles and responsibilities, but the expectations of other roles during a response. As challenges were presented, these staff members were able to adapt and develop solution alternatives that led to successfully completing all missions assigned.

Specific Feedback of these strengths included:

- SEOC received calls of thanks for positive impacts directly resulting from proactive measures.
- Volume of debris that would normally take up to 18 months to process was completed in 6 months.
- Coordination with electrical companies and the Iowa Utilities Board (IUB) within the SEOC helped to inform and educate.
- Pharmacies and gas stations receiving generators in order to continue to provide services to the public.
- Four semi-trailers of ice were quickly delivered from out of state.

Opportunities for Growth

Growth Area 1.1: The State needs to identify an alternate process for obtaining situational awareness from county EOCs during long-term, widespread power outages and disruptions to communications.

Analysis: Counties in eastern Iowa reported delayed communications with the SEOC due to power outages and communication was disrupted for all counties that were in the path of the derecho. Contingency measures to communicate directly with field personnel for coordinating disaster services was a new process for some agencies, which created delays, confusion, and in some cases, duplicative efforts. For example, representatives in the SEOC supporting emergency support function tasks had to make phone calls directly to multiple field personnel to coordinate hotel rooms for sheltering and those field personnel made duplicate phone calls. There was not a backup process for communication and coordination for long-term power and cellular outages. For the 14 days following the storm, communication capabilities throughout the state varied, and in some areas, there was consistent conflict of information. Examples of conflicting information include: the difference in field staff reporting feeding and sheltering needs and the numbers that logistics had were different; and the DOT arriving at dump sites with inaccurate closing times and the amount of debris the sites were able to take. Interviewees stated it would be helpful in the future to have coordination with field staff on a regional level. Local participants hit hardest by the derecho questioned if the SEOC has a formalized alternate method to check the status of impacted counties.

Growth Area 1.2: Some local emergency management faced limitations for staffing their emergency operations centers, and uncertainties about roles and responsibilities, expectations, and processes.

Analysis: The success of operational coordination is highly dependent on the ability of county EMAs to activate and staff their EOCs, understand roles and responsibilities, manage expectations, and have working knowledge of disaster processes. Failure to do so can impact the execution of missions. Many county EMAs have limited staffing and rely on

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volunteers to supplement disaster response efforts. The pandemic created additional gaps, as many volunteers were not available and new coordinator training was not well implemented for a number of new county EMAs, leading to a lack of knowledge and skillsets for critical processes.

Growth Area 1.3: Some local communities did not get necessary warnings for the imminent storm and timely information following the derecho to make informed decisions.

Analysis: In some communities, concerns were raised that only severe thunderstorm warnings were issued. Many interviewees stated that they were unaware of the severity of the incoming storm, leaving citizens across multiple counties unaware of the hurricane-force sustained winds, and the increasing storm impacts to communities in its path. Following the storm, the long-term power outages and cellular disruptions created increasing concern surrounding citizen safety and needs that were possibly not being met due to the inability to communicate. Access to timely, reliable information before and after disasters minimizes confusion and frustration for all. The SEOC should consider enhancing educational opportunities for communities regarding the statewide notification system to include how to access the system and expectations for the information received.

Growth Area 1.4: Coordination, communication, and collaboration between local emergency management, the SEOC, and the Red Cross was strained.

Analysis: Mass care service providers such as non-governmental, volunteer, and faith-based organizations, are key partners with specific roles and responsibilities during disaster response and recovery operations. During the response, SEOC personnel were challenged with communicating and coordinating with the Red Cross. When outreach and requests were made, there was limited and inconsistent information being provided by the Red Cross. Feeding and sheltering functions were disjointed, making it difficult to identify who was coordinating the sheltering and feeding services in affected communities. Local and State personnel developed ways to support communities and find volunteers to help. HSEMD should continue to foster relationships with all mass care service providers and develop contingency plans when providers may not be able to support a disaster.

Growth Area 1.5: Information sharing and the partnership between cellular service providers and the SEOC could have been improved.

Analysis: A coordinated approach to restoration of communications infrastructure was not possible due to a lack of effective information sharing with private infrastructure owners and cellular service providers. HSEMD should foster relationships with cellular service providers to gain a better understanding of what is needed to recover from disruptions, who owns communications infrastructure, and expectations of processes and personnel that will maximize coordination to provide an effective response.

2. Debris Management

Strengths

Strength 2.1: HSEMD and State partners came together quickly to establish a State master agreement to procure and contract debris specialists and associated monitoring services to process the extreme volume of debris across impacted areas.

Analysis: Hurricane-force winds sustained throughout the derecho created widespread debris greater than any other disaster. HSEMD personnel have a great deal of experience in debris management. With the collaboration of partners,

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within the first 14 days more than 17,000 truckloads of debris had been removed. Coordination efforts resulted in the rapid development of a State debris master agreement that saved local communities millions of dollars and transferred the coordination of the debris to the State.

Strength 2.2: HSEMD effectively coordinated a timely response of personnel and equipment to begin debris clean-up across the state.

Analysis: HSEMD worked with partners such as the Iowa Department of Transportation, Iowa Army National Guard, utility companies, local emergency management, disaster debris management vendors, Volunteer Iowa, and the governor's office to coordinate debris removal from 26 counties across the state.

Opportunities for Growth

Growth Area 2.1: Some local emergency management agencies have limited understanding of their debris management process and the associated expectations.

Analysis: In some counties there were challenges with not fully understanding the requirements for their debris management process. This lack of understanding led to a misconception by some that emergency debris removal at the local level required the involvement of FEMA or the State in order to execute or to comply with perceived federal requirements. Consider additional education and training, supported by the State, to ensure consistent messaging and a baseline of knowledge is established for all counties.

Growth Area 2.2: HSEMD and partners that established the State debris master agreement contract need to refine the process and provide clear guidance and expectations for future disasters.

Analysis: The State debris master agreement contract was beneficial to local governments and proved to be a successful example of a best practice. It is critical for HSEMD to continue to make refinements for future disasters, develop guidance, trigger mechanisms, and detailed information surrounding when the State will assume responsibility for debris removal contracting, and provide training to local officials to help manage expectations.

Providing guidance will strengthen:

- Broader partnerships between public and private resources and potentially expand networks of assets and expertise
- Identification of ways to work with local landfills, landowners, and private citizens to examine different options and permissions/restrictions on how to handle and sort debris

Growth Area 2.3 A better understanding of applicable FEMA Public Assistance Program regulation, policy and guidance, and related supporting documentation for claiming expenses under the program could be improved.

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Analysis: With transitions in staffing and the level of experience always changing, advantages for having quick job action guides and a frequently asked questions reference guide would benefit communities. Knowledge of evolving Public Assistance guidelines from year to year would require job aids to be reviewed and updated regularly. Some county EMA coordinators are part-time and have not participated in formalized debris management training or have knowledge of contracting rules. Develop simple job aids to assist communities with the debris management process.

3. Situational Assessment

Strengths

Strength 3.1: HSEMD, State agencies, private organizations, and local emergency management recognized the challenges of gaining initial situational assessments and worked together to gather and provide information.

Analysis: The SEOC's processes surrounding the management of a common operating picture became a critical function during the initial stages of the response. Seasoned employees began to take past experiences and incorporate creative solutions to problems never before faced. A mass care task force was formed to supplement the Red Cross partners, who were unable to coordinate sheltering and feeding services within the first five days. State and local personnel worked together to develop solutions to provide information to vulnerable populations. The HSEMD public information team established the joint information center (JIC) and began to implement well-established processes. The HSEMD operations section worked closely with other State agencies and private-sector partners to receive and share the most accurate information possible.

Strength 3.2: HSEMD opened the SEOC to public/private partners, volunteer organizations, and independent utility companies to create maximum coordination and an enhanced ability to provide vetted information through their subject matter experts.

Analysis: An all-hands approach within the SEOC was critical in order to be responsive to the resource and information requests coming in from local jurisdictions. Subject matter experts from independent utility companies had a seat in the SEOC and were able to share information, help develop solutions to issues, and coordinate with HSEMD's public information team.

Strength 3.3: WebEOC was utilized for situational assessment and coordination of information sharing within the SEOC and with external agencies.

Analysis: Personnel supporting disaster response within the SEOC, as well as outside agencies, use the software to share situation reports, press releases, and other documentation. The use of WebEOC allows for greater situational awareness for all partners and serves as record of events supporting the reimbursement process for this disaster.

Opportunities for Growth:

Growth Area 3.1: There were difficulties in gaining rapid understanding of needs and vulnerabilities during the initial phase of the response.

Analysis: Splintered communication due to outages and disruptions, varying degrees of understanding of the resources needed, or documentation inaccuracies made it challenging to obtain a situational assessment in the initial stage of the response. Information sharing among partners is critical in order to deconflict information from multiple sources, bridge gaps of limited understanding, and coalesce different sets of information being reported. Develop standardized

checklists in the event of power outages or further educate local emergency management agencies of the All-Hazards Dashboard and other capabilities of WebEOC.

Growth Area 3.2: WebEOC was not used by some local emergency management during the response, which limited information sharing.

Analysis: WebEOC challenged some users to the point it became a hindrance. Capabilities of the All-Hazards Dashboard were not being used to maximize the coordination of the incident response and additional training on the system was requested. Some county EMAs stated that while WebEOC can be useful, it is too cumbersome or not useful for real-time information. It is not helpful to have to search for information, such as situation reports, and is often times easier to create information rather than try to find it in WebEOC. Considerations should be given to the development and implementation of additional WebEOC capabilities to streamline information sharing during response. Considerations should include:

Data points for dashboards may include (but is not limited to):

- NWS weather forecasts
- Utility outages
- Flood gauges
- Road closures and road conditions
- Sheltering and feeding locations
- List of critical vulnerabilities
- Common resource requests from specific areas

- Development of regional/district groups within WebEOC for more localized disaster and information sharing that can be activated at the local level;
- Education and outreach to increase knowledge, understanding, and usage of the All-Hazards Dashboard. This will help contribute to a clearer common operating picture for the SEOC, State agencies, the private sector, and county EMA coordinators.
- Encourage engagement and participation in the WebEOC work groups. This group will continue to examine ways to improve WebEOC boards and platform functionality to streamline information that is manageable to end users.

Growth Area 3.3: The SEOC needs to develop a quality control process for situation reports.

Analysis: Accurate and up-to-date situation reports are critical for maximizing situational assessment during a response and for historical documentation. During the 14-day response, there were several areas of missing and inaccurate information in the situation reports. For example, SEOC objectives were not included after day three in the reports. In addition, conflicting information pertaining to requests for generators and spotty cell service did not change for 14 days; however, further in the body of each report, generator demobilization was occurring and cell service had been re-established. Conflicting information regarding coordination efforts for mass care services and a lack of information capturing the significant agriculture damage and losses are examples of why a quality control process needs to be established and implemented. Develop and implement a validation process for situation reports to promote accuracy of information.

Growth Area 3.4: The SEOC needs to review the process for ensuring the contact information for partnering organizations is updated and accurate.

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Analysis: Increased emphasis should be placed on updating emergency contact information. Contact information of external partners that are not often utilized, such as the Civil Air Patrol (CAP), was outdated and requests sent to the CAP commander were not received in a timely manner. HSEMD should review and manage the process for ensuring all contact information for partnering agencies is updated.

Growth Area 3.5: Engagement and education of the disaster process with local communities, elected officials, and whole community partners could be improved.

Analysis: Engagement and education of the disaster process, before and during a disaster, is critical in order to maximize the response and recovery efforts. While these types of activities start at the local level, this complex disaster highlighted the need to improve year-round communication that emphasizes the expectations, roles, responsibilities, and processes that occur during disaster response and recovery. Consideration should be given by the State to supporting the development and implementation of a whole community education program that will foster and build preparedness, increase effective coordination, and provide information that will help to eliminate barriers during response and recovery from all-hazards disasters.

4. Logistics/Resources

Strengths

Strength 4.1: HSEMD was able to successfully secure, assign, and deliver resources based on requests made, even though there was an absence of perfect information.

Analysis: Lessons learned from past disasters became a best practice for the experienced leadership and personnel in the SEOC. Efforts initiated during the response included practical approaches for pre-staging equipment and creating and fulfilling mission assignments. State agency partners, Volunteer Iowa, Safeguard Iowa Partnership, and numerous relationships with utility companies contributed to the completion of all missions assigned.

Strength 4.2: The SEOC quickly coordinated the deployment of staged resources, such as generators, providing needed services for local jurisdictions and private-sector partners.

Analysis: Established relationships with partners, such as the Iowa Department of Transportation, Iowa Department of Natural Resources, Iowa Army National Guard, and many others, were very helpful for staging resources near affected communities.

Opportunities for Growth:

Growth Area 4.1: HSEMD should review and support local emergency management agencies' education and implementation process and emphasize to all stakeholders within the whole community the formal resource request process.

Analysis: Some new county coordinators were unfamiliar with the resource request process. Some county EMA offices stated they were not made aware of resources coming into their jurisdictions. In other instances, counties received resources that their office did not request. For example, Linn County was not expecting the delivery of meals that a Red Cross representative requested, and generators that were delivered and pre-staged caught the county off guard. This created stress on the system and made it difficult to understand why resources were being received. Resource requests were made to the SEOC and straight to the governor from personnel outside of the county EMA offices. Concerns that

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political pressures caused the standardized resource request process to be circumvented at the local level made it difficult to manage resources. The State should support the development of educational opportunities to promote the understanding of standardized processes and tools for requesting resources to reduce the delay in providing vital resources to impacted communities.

Growth Area 4.2: The SEOC's coordination and communication process for pre-staging resources and pushing resources to county emergency management agencies needs improvement.

Analysis: Pre-staging resources saves valuable time and may prevent cascading impacts for areas that might not have had resources otherwise. As proactive measures are taken to coordinate pre-staged resources, it is critical the SEOC ensure local communities are aware and are prepared to receive and manage these things. As food, generators, and ice trucks arrived at local communities, county EMAs had not received communication from the SEOC, which created additional stress on the staff. The SEOC should review their formalized process to validate communication with the county EMA has been completed prior to the arrival of pre-staged and proactive resources.

5. Mass Care Services

Strengths:

Strength 5.1: HSEMD personnel brought partners together to create solutions and fill gaps as they were identified.

Analysis: Limited and inconsistent mass care support from planned providers, such as the Red Cross, forced an immediate need to find solutions to sheltering and feeding services. HSEMD personnel worked with other agencies to establish a mass care task force to develop solutions for services that weren't being provided. SEOC personnel worked with county EMAs, volunteers, and AmeriCorps to establish a process for managing solicited and unsolicited donations.

Opportunities for Growth:

Growth Area 5.1: Coordination with refugee and immigrant populations needs improvement.

Analysis: There was a lack of centralized points within communities to connect refugees and immigrant communities with disaster support, which created limitations for understanding the unique needs and locations of refugee and immigrant populations. HSEMD personnel in the SEOC worked closely with the Department of Human Services when the gap was identified to develop solutions. There is a lack of coordinated effort surrounding the planning process and additional need to look at culture and linguistic needs. High-level community profiles for vulnerable populations, including the refugee and immigrant populations during disasters, should be considered when developing a plan. Consider developing a program to examine community profiles and identify underserved communities throughout the state, and coordinate plans to provide support to them.

Growth Area 5.2: A formalized food safety process during disasters needs to be developed.

Analysis: Representatives from a multitude of agencies stepped in to help coordinate feeding capabilities across impacted communities. Feeding citizens was initially thought to be going well due to the amount of food and volunteers available. But upon further discussion, it was determined there is not a formalized food safety process that vendors supplying food were expected to complete. Without a formalized process, problems with food safety increase. The Department of Inspections and Appeals (DIA) understands the urgency and need for this process. HSEMD should consider supporting DIA with the establishment of a formalized food safety process for disaster response.

A formalized process will help to:

- Reduce potential food-related illness
- Reduce waste
- Avoid duplication of efforts
- Standardize food safety processes throughout the state
- Create a centralized place for contact information related to food

Growth Area 5.3: Coordination between the SEOC and sheltering partners could be improved.

Analysis: By day two of the response, sheltering was being utilized in four counties. As SEOC representatives stepped in to help coordinate sheltering procedures, they were met with challenges due to pandemic mandates. At the height of sheltering needs, 11 days into the derecho response, 191 people were being sheltered across the state. To minimize the barriers associated with congregate and non-congregate sheltering and improve ongoing services for the sheltering process, training and exercises to improve the communication and coordination with traditional and other sheltering partners should be conducted.

Growth Area 5.4: State disaster case management system should be reviewed and refined.

Analysis: HSEMD personnel, Department of Human Services personnel, and other ESF 6 agencies supporting the response were unable to identify an established standardized process for case management. County emergency management agencies also stated that once a case was handed over to case management personnel, there was no information available for follow-up or to track. Development of a continuous improvement working group that will focus on the creation and implementation of a comprehensive case management program for the State of Iowa is needed.

CONCLUSION

Response to this history making disaster, compounded by the impacts of a global pandemic, was an overall success. The experiences and lessons learned are already serving as a catalyst to strengthen preparedness and improve response and recovery processes for future disasters.

This AAR/IP should be used as a tool to:

- Create and enhance plans
- Strengthen organizational gaps
- Evaluate equipment and technology to support future disasters
- Develop and enhance educational programs through training and exercises

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- Integrate external stakeholders and the whole community into solutions

As HSEMD personnel continue their commitment to understand opportunities for growth, from all situations and experiences, the outcomes will contribute to enhanced capabilities for both State and local agencies.

APPENDIX A: IMPROVEMENT PLAN MATRIX

The improvement planning matrix is designed to provide concise statement of findings and recommendations to consider that will establish a roadmap for growth. The matrix identifies 19 specific areas that are associated with the derecho response yet will contribute to help formalize and/or enhance processes, plans, and procedures for future disasters.

Opportunity for Growth	Recommendation for Corrective Action	Primary Organization	Element (P.O.E.T.E.)
1.1 The State needs to identify an alternate process for obtaining situational awareness from county EOCs during long-term, widespread power outages and disruptions to communications.	#1. Review the established process for coordination between county and State levels, and ensure that alternate, atypical means of communication outside of technology methods are defined and practiced. #2. Consider developing alternate methods for disaster conference briefing capabilities when technology is not available.	HSEMD, IEMA	Planning Equipment Training Exercise
1.2 Local emergency management faced limitations for staffing their emergency operations centers, and uncertainties about roles and responsibilities, expectations, and processes.	#1. Evaluate options to provide emergency surge staffing to local EOCs for support when disasters reach a specific catastrophic level. #2. Continue to train all personnel to build knowledge and skillsets and create job aids to enhance EOC operations.	HSEMD, IEMA	Planning Organization
1.3 Some local communities did not get necessary warnings for the imminent storm and timely information following the storm to make informed decisions.	#1. Consider enhancing systems and tools for local/regional joint information center capabilities to ensure communities have proper information for accessing statewide notification systems.	HSEMD	Planning Training
1.4 Coordination, communication, and collaboration between local emergency management, the SEOC, and the Red Cross was strained.	#1. Continue to strengthen the new mass care service task force and develop plans that will identify specific service steps if the primary provider is unavailable. #2. Continue to foster relationships with all mass care service providers year round to gain an understanding of current capabilities and limitations.	DHS	Organizational Structure Planning Training
1.5 Information sharing and the partnership between cellular service providers and the SEOC could have been improved.	#1. Incorporate cellular service providers and cellular infrastructure owners into outreach and the Safeguard Iowa Partnership.	HSEMD	Planning
2.1 Some local emergency management faced limitations related to understanding the overall debris management process and the associated expectations.	#1. Consider supporting the development of educational strategies focused on debris management planning and expectations, incorporating case study discussions, consistent guidance documents, and subject matter expert presentations.	HSEMD	Planning Training

	#2. Consider supporting the development of a simple checklist to address the debris management process.		
2.2 HSEMD and partners that established the State debris master agreement contract need to refine the process and provide clear guidance and expectations for the program for future disasters.	#1. Consider developing guidance, trigger mechanisms, and detailed information for the State debris master agreement contract to share with county coordinators. #2. Consider developing a strategy for conducting workshops and trainings for local and State officials regarding debris management challenges and questions.	DAS, HSEMD	Planning Training
2.3 Coordination of debris management guidance between the State and local emergency management needs to be consistent and improved.	#1. Consider supporting the development of a simple debris management checklist for communities and volunteers that is easy to read and understand with little or no training needed to use.	HSEMD, IEMA	Planning Training
3.1 There were difficulties in gaining rapid understanding of needs and vulnerabilities during the initial phase of the response.	#1. Consider supporting the development of a checklist of “need to know” information that both State and local officials automatically collect during an approaching or imminent disaster event. #2. Consider supporting additional training opportunities for county EMAs to increase the understanding of how they can create and use a one-view dashboard to collect and share critical data points that will provide a common operating picture.	HSEMD, IEMA	Planning Equipment
3.2 HSEMD’s incident management system, WebEOC, wasn’t used by some local emergency management during the response, which limited information sharing.	#1. Examine ways to improve WebEOC and ensure the system is manageable to end users. #2. Consider supporting further education opportunities that will support a higher utilization of WebEOC by establishing regional disaster groups in each of the six emergency management districts so that counties can create a WebEOC incident for more localized events.	HSEMD	Planning Training Equipment
3.3 The SEOC needs to develop a quality control process for situation reports.	#1. Consider developing a formalized quality control and validation process for situation reports to improve the accuracy and completeness.	HSEMD	Planning Training
3.4 The SEOC needs to review the process for ensuring contact information for partnering agencies is updated and accurate.	#1. Review the current standardized process to update partnering organization contact information.	HSEMD	Planning
3.5 Engagement and education of the disaster process with local communities, elected officials, and whole community partners could be improved.	#1. Consider supporting the development and implementation of a whole community disaster preparedness and response educational	HSEMD, IEMA	Planning Training

	program to be delivered annually virtually or in-person in each of the six emergency management districts.		
4.1 HSEMD should review and support local emergency management agencies' education and implementation process and emphasize to all stakeholders within the whole community the formal resource request process.	#1. Consider supporting the development of educational opportunities such as district-level workshops to further promote the understanding of standardized processes and tools for requesting resources.	HSEMD, IEMA	Planning Training
4.2 The SEOC's coordination and communication process for pre-staging resources and pushing resources to county emergency management agencies needs improvement.	#1. Review the coordination and communication process with county EMAs and ensure it includes validation that communities are aware of and prepared to receive, and track pre-staged and proactive resources coming into their communities.	HSEMD, IEMA	Planning Training
5.1 Coordination with refugee and immigrant populations needs improvement.	#1. Consider formalizing a process and plan to examine community profiles and identify underserved communities throughout the state. #2. Coordinate a plan to provide support for cultural and linguistic needs.	DHS, IDHRC, HSEMD	Planning Training Exercise
5.2 A formalized food safety process during disasters needs to be developed.	#1. Support the development of emergency disaster food safety processes and procedures to be implemented throughout the state and with coordinating partners. #2. Support the development of a training process for vendors to implement food safety procedures.	DIA	Planning Training Exercise
5.3 Coordination between the SEOC and sheltering partners could be improved.	#1. Support the development of a training program for all personnel to gain a stronger understanding of the sheltering program.	HSEMD	Planning Training
5.4 State disaster case management system should be reviewed and refined.	#1. Consider establishing a workgroup made up of State and local personnel that will contribute to the development and implementation of a comprehensive case management program.	HSEMD, DHS, ICA	Planning Training Exercise

APPENDIX B: PARTICIPATING ORGANIZATIONS

Participating Organizations	
State	
Iowa Dept. of Homeland Security and Emergency Management	Iowa Department of Inspections and Appeals
Iowa Department of Natural Resources	Iowa Department of Human Services
Iowa Department of Public Safety	Iowa Department of Public Health
Iowa Department of Transportation	Iowa Utilities Board
Iowa Economic Development Authority	Iowa Association of Electric Cooperatives (IowaREC)
Local	
Audubon County EMA	Johnson County EMA
Boone County EMA	Jones County EMA
Cedar County EMA	Linn County EMA
Dallas County EMA	Madison County EMA
Green County EMA	Marshall County EMA
Guthrie County EMA	Muscatine County EMA
Hardin County EMA	Polk County EMA
Iowa County EMA	Poweshiek County EMA
Jackson County EMA	Scott County EMA
Jasper County EMA	Story County EMA
Other	
Civil Air Patrol	Aliant Energy
Iowa Army National Guard	Safeguard Iowa Partnership
MidAmerican Energy	Joyce Flinn