

2024

JOHNSON COUNTY, IOWA

# AFTER-ACTION REVIEW

AND ASSOCIATED  
IMPROVEMENT PLAN

**January 2024  
Blizzard**

Prepared on behalf of the Johnson County  
Emergency Management Agency

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## Handling Instructions

1. The title of this document is *Johnson County, Iowa January 2024 Blizzard After-Action Review (AAR)*. It was conducted on 1/24/24 at 10 am with an online survey, face to face meeting and was audio recorded by the contractor. Follow up written comments and survey responses were incorporated into the document.
2. The information gathered in this document is FOR OFFICIAL USE ONLY (FOUO) and should be handled as sensitive information not to be disclosed. This document should be safeguarded, handled, transmitted, and stored in accordance with appropriate security directives. Reproduction of this document, in whole or in part, without prior approval from Two Rivers Emergency Management, LLC is prohibited.
3. Although designated “FOUO,” the overall content is unclassified. However, information may be restricted to those with a need to know.
4. For more information, please consult the following points of contact (POC):

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## Table of Contents

Handling Instructions.....	1
Contractor POC.....	1
Sponsoring Organization POC.....	1
Table of Contents.....	3
Message from the Director.....	5
Introduction.....	7
Major Strengths.....	8
Primary Challenges.....	8
Situational Summary.....	8
Timeline of Events.....	11
Appendix A: Improvement Plan.....	13
Appendix B: Participating Stakeholders/Partners.....	17

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## **Message from the Director**

January 2024 demonstrated what Iowa weather is capable of during what seemed to be a fairly warm winter. As local organizations transitioned from one winter storm to another, we positioned ourselves with the knowledge and experience of previous incidents to protect the citizens and travelers throughout Johnson County. Our continued goal is to assess our disaster responses and find opportunities to improve where they arise.

This After-Action Review (AAR) is an examination in the preparation, response, and recovery operations conducted by the Johnson County stakeholders and partners to determine our best practices and areas for improvement. This document has been compiled by these stakeholders in coordination with Johnson County Homeland Security & Emergency Management. The AAR will also allow for individual partners to assess their organizational plans and systems in response to future winter weather incidents.

I would like to thank our Federal, State, and local partners in the continued collaboration that allows us to support our community during times of disasters.

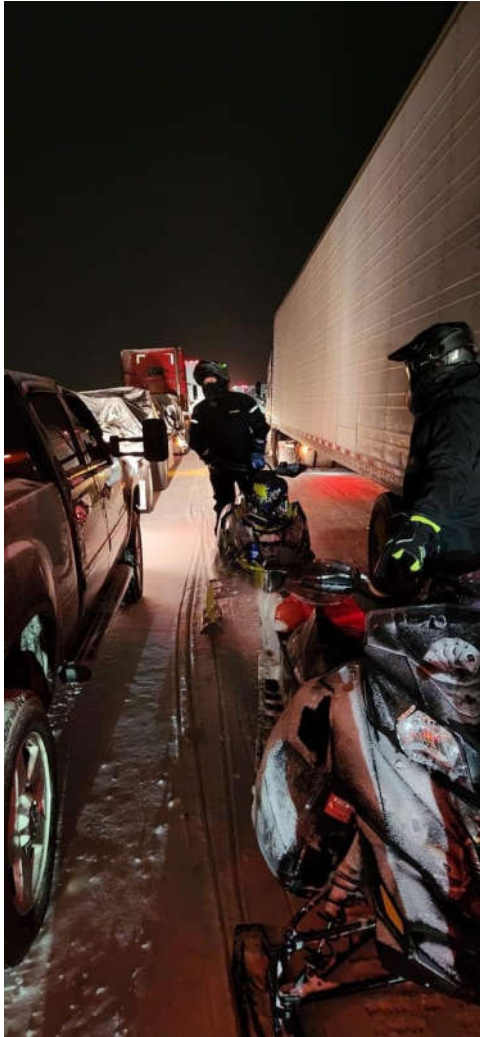
Dave Wilson  
Director  
Johnson County Iowa Homeland Security & Emergency Management

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## Introduction

Primarily focused on the winter weather event January 11 – 14, 2024 this after-action review (AAR) is intended to facilitate learning and improvement. It achieves this by fostering a structured and open discussion among participants, aiming to:



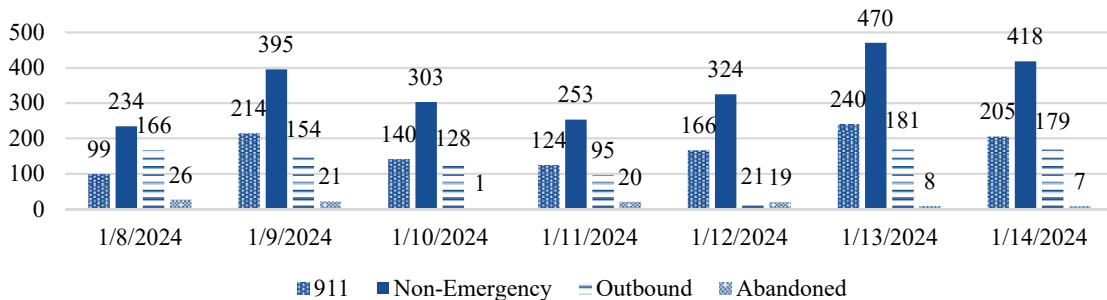
- Understand what happened: The AAR helps everyone involved gain a clear picture of the incident’s timeline, actions taken, and results achieved.
- Identify strengths and weaknesses: By examining the incident, the AAR helps identify areas where things went well and areas for improvement.
- Learn from experience: The AAR encourages participants to reflect on their experiences and identify key takeaways that can be applied in future situations.
- Drive positive change: Ultimately, the AAR aims to translate the lessons learned into concrete actions that can enhance future performance and prevent similar issues from recurring.

**Out of the respondents, 92% used previously developed plans, policies, or procedures and 92% said it helped them during their response.**

This AAR was produced at the direction of the Johnson County Emergency Management Agency with input, advice, and assistance from organizations that participated in the response. Plans, policies, or procedures used during the response included the CAT operational plan, ESF 3, Volunteer Snowmobile Team planning, snow removal procedures, DOT policies, and other miscellaneous procedures.

The lessons learned from this AAR will help all Johnson County stakeholders understand the continuous effort and to build upon the strengths to identify the areas for improvement, and to establish preparedness efforts for future incident responses.

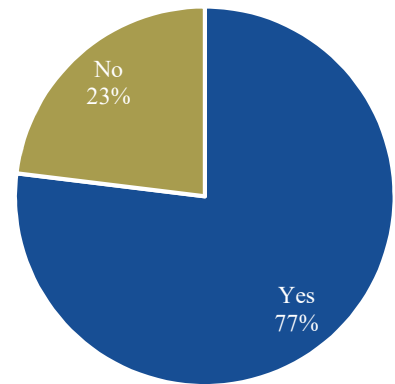
Dispatch Call Types by Day



## Major Strengths

- ◆ Use of the County Assist Team operational guideline under ESF 3.
- ◆ Snow plowing operations.
- ◆ Use of the volunteer snowmobile groups to assist with rescue operations.
- ◆ Internal communications and WAZE modifications.
- ◆ Hotels on interstates for stranded citizens and key public safety staff living out of town.

Did the success of your organization's response depend on another organization's actions?



## Primary Challenges

- ◆ External communications and understanding of certain organization's roles and operational priorities when it came to sporting events being held during a blizzard.
- ◆ The increasing workload, hours and stress on incident-dedicated staff.
- ◆ Needing a better understanding from rural VFDs and more deliberate participation into the pre-planning process for response operations as many were not up to speed on CAT.
- ◆ More pre-staged assets in less than ideal locations and availability of assets.

## Situational Summary

As provided by the National Weather Service in Des Moines, "After an unseasonably warm December to end 2023, the beginning of 2024 reminded Iowans what winter can really feel like as an upper-level low-pressure system brought heavy snow, blizzard conditions, and frigid cold to the state. This onslaught of winter weather came in waves, starting with heavy snowfall on the night of January 11[, 2024] and lasting through January 12[, 2024]. Accumulations were highest over southern and southeastern Iowa where amounts ranged from 10 to 14 inches, then steadily tapered off further north and west where 6 to 8 inches were more common.

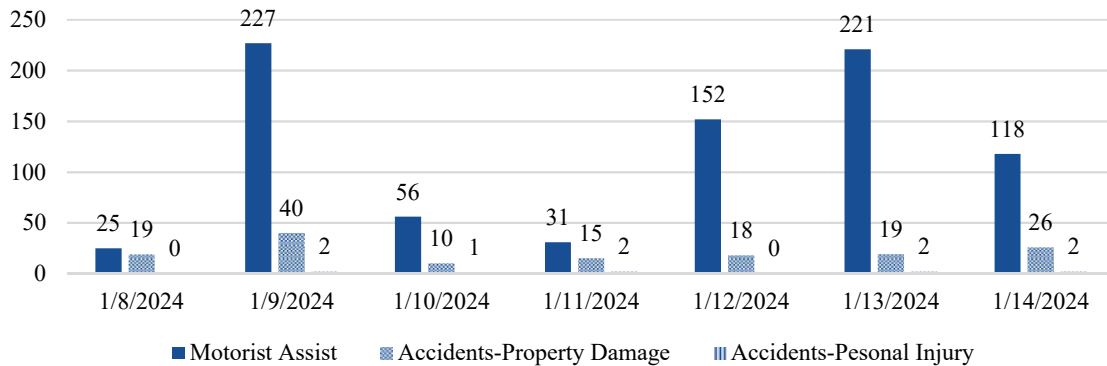
The heavier snowfall rates moved out of the area by midday Friday, January 12<sup>th</sup>, [2024] but the impacts had only just begun with light snow and gusty winds continuing periodically through Friday and into Saturday, January 13<sup>th</sup> [2024]. The residual snowpack from the winter storm earlier in the week and powdery snow falling from this system resulted in blizzard conditions as gusty winds picked up Friday [01/12/24]. Widespread wind gusts of 35 to 45 mph were observed throughout Iowa, with some locations gusting over 50 mph at times. Whiteout conditions developed on roadways, as blowing and drifting snow made travel nearly impossible for much of Friday [1/12/24] and Saturday [1/13/24]. These poor travel conditions resulted in multiple road closures, including stretches of I-80, with many more roads deemed impassable by the Iowa

Department of Transportation. Travel conditions didn't fully improve until the morning of Sunday, January 14[, 2024] when wind gusts finally diminished.

In addition to the heavy snow and blizzard conditions, this system brought down an Arctic air mass which plummeted temperatures well below zero. Wind chills during the blizzard dropped to the -10s to -20s on Friday [1/12/24], then -30s to -40s by Saturday [1/13/24] evening, creating life-threatening danger with this winter storm.”

This Blizzard was considered locally as a Type 4 incident. However, it was still decided to activate the EOC at a Level 2 in a virtual operation. Though virtual operations provide their own complexities, it was decided to be the best option unanimously at the onset of the incident. The only in-person EOC functions were ESF 2 and ESF 5. ESF 1, 3, 4, 6, 7, 8, 9, 12, 13, and 15 were all activated but were virtual due to their own operational needs.

Traffic-Related Calls for Service



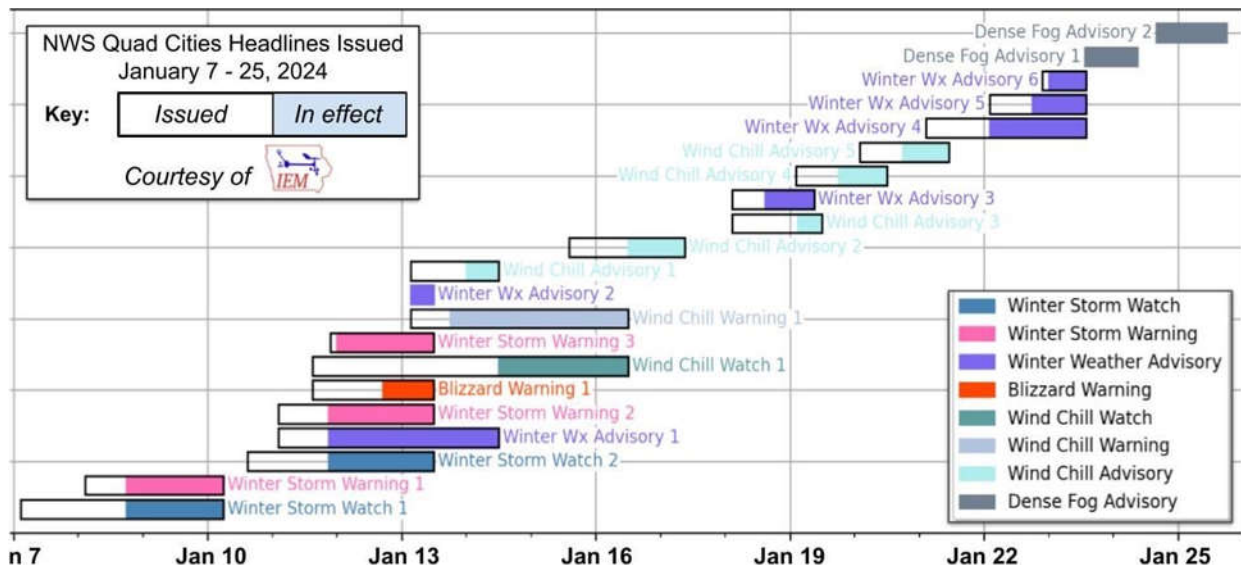
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## Timeline of Events

Date	Time	Significant Event
January 8, 2024	1227 Hours	Six (6) hotels are identified for potential stranded motorists.
January 8, 2024	1737 Hours	CAT SOP Activation for next day—Event 6 Reserved starting 1/9/24 at 1200 Hours.
January 9, 2024	1200 Hours	Event 6 channel is reserved for Secondary Roads and activated CAT at end of normal shift until next am. Team at Melrose Shop.
January 11, 2024	0441 Hours	NWS-Quad Cities sent a weather briefing packet with initial Winter Storm Warning, calling for near blizzard conditions in the Johnson County area.
January 11, 2024	0700 Hours	NWS-Des Moines produced a weather briefing concerning the upcoming hazardous winter weather expected. This is when the Winter Storm Warning was added to NWS briefings.
January 11, 2024	1300 Hours	NWS-Des Moines and NWS-Quad Cities host weather briefings about the incoming snowstorm. Much of Iowa was in a Winter Storm Warning with predicted near-blizzard conditions and accumulation of 5”-10” for the Iowa City area.
January 11, 2024	1345 Hours	NWS-Des Moines and NWS-Quad Cities host weather briefings about the incoming snowstorm. Much of Iowa was in a Winter Storm Warning with predicted near-blizzard conditions and accumulation of 5”-10” for the Iowa City area.
January 11, 2024	1516 Hours	NWS-Quad Cities send a briefing packet, upgrading the Winter Storm Warning to a Blizzard Warning for the Johnson County area.
January 12, 2024	0344 Hours	Iowa DOT road conditions map indicates roads 100% covered by snow for the Johnson County area.
January 12, 2024	0430 Hours	NWS-Quad Cities provided a decision support briefing concerning hazardous winter weather. Indicating dangerous travel by the evening with blizzard conditions developing. 5”-8” of snow expected. Blizzard Warning in effect from 1700 on 1/12/24 until 1200 on 1/14/24.
January 12, 2024	0600 Hours	The NWS-Des Moines produced a weather briefing concerning hazardous winter weather. This primarily focused on the blizzard conditions, cold weather, and accumulations of 6”-8” of snow.
January 12, 2024	0812 Hours	Iowa City Transit issued a press release to advise passengers to prepare for potential winter storm impacts.
January 12, 2024	0944 Hours	Iowa DOT road conditions map indicates some Johnson County roads as ‘Travel Not Advised.’
January 12, 2024	1241 Hours	Iowa DOT road conditions map indicates all of Johnson County roads as ‘Travel Not Advised.’
January 12, 2024	1455 Hours	The Army Corps of Engineers advises that they cannot keep the Prairie Du Chien Rd NE open due to snow drifting over the Iowa River dam.
January 12, 2024	1554 Hours	Johnson County Emergency Management drafts a press release notifying the public that Secondary Roads will no longer be plowing roads at 1800 Hours on 1/12/24 until early morning hours 1/13/24 due to dangerous conditions. Second CAT Team SOP activated for this day at end of shift.
January 12, 2024	1621 Hours	A draft press release from Johnson County is drafted regarding the closure of Prairie Du Chien Rd NE.
January 12, 2024	1630 Hours	Gate closed at Prairie Du Chien Road NE near Marina and barricades set in place on West Overlook Road at triangle preventing cars from trying to cross the Coralville Dam Road.

## Johnson County, Iowa January 2024 Blizzard After-Action Review (AAR)

Date	Time	Significant Event
January 12, 2024	1800 Hours	County Assist Team activated with crew at Melrose shop again. Home Game at Carver.
January 12, 2024	1800 Hours	Secondary Roads snowplows removed from the roads except CAT team.
January 12, 2024	1911 Hours	Iowa City Airport recorded a wind gust of 41 mph, the highest for the airport during the event.
January 13, 2024	0313 Hours	Incident #296384 issued by Iowa DOT regarding the interstate closure of I-180 West from MM 234 to 237.
January 13, 2024	0928 Hours	Iowa DOT road conditions map indicates some of Johnson County roads, including I-80 as being 'Closed.'
January 13, 2024	1002 Hours	City of Iowa City issues a press release providing information regarding city facilities and community resources available during cold temperatures.
January 13, 2024	1200 Hours	County Assist Team deactivated
January 13, 2024	1241 Hours	Iowa DOT road conditions map indicates that I-80 is no longer 'Closed' but remains as 'Travel Not Advised.'
January 13, 2024	1531 Hours	The Army Corps of Engineers advises they will keep the Prairie Du Chien Rd NE closed for another night due to the road drifting closed every 15 minutes.
January 13, 2024	1653 Hours	Johnson County Emergency Management issues a press release advising that travel is not advised in Johnson County until 1200 hours on 1/14/24.
January 13, 2024	1800 Hours	County Assist Team activated
January 13, 2024	2100 Hours	NWS records the highest snowfall report 2 miles SSW of Williamstown at 10.5".
January 14, 2024	0600 Hours	County Assist Team deactivated at sun up.
January 14, 2024	0752 Hours	The Iowa City Airport experienced a low wind chill of -40 degrees Fahrenheit. The lowest recorded wind chill throughout the event.
January 14, 2024	1200 Hours	CAT SOP—Event reservation ended.
January 14, 2024	1200 Hours	Road across Coralville Dam reopened.
January 15, 2024	0200 Hours	Secondary Roads was contacted to have a snowplow assist with an ambulance (Midwest Medical) stuck on Lynden Heights, just north of 340 <sup>th</sup> Street. CFS #21007691 Not a CAT team call. Had to be called in.
January 15, 2024	2352 Hours	The Iowa City Airport experienced a low temperature of -20 degrees Fahrenheit. The lowest recorded actual temperature throughout the event.



## Appendix A: Improvement Plan

Core Capability	Issue/Area for Improvement	Corrective Action	Primary Responsible Organization/POC	Start Date	Completion Date
Planning	CAT SOG familiarity amongst VFDs.	The CAT SOG should be exercised with frequency to ensure familiarity between partners and with as much notice of activation as possible.	JCEMA	2/2024	12/2024
Planning / Operational Coordination	Central command staffing at EOC for limited key staff	Partial onsite activation of the Emergency Operations Center needed for CAT activations in house	JCEMA	2/2024	12/2024
Planning	Secondary CAT initiation	Have a second or third team established, break up the County by zones.	JCEMA / Secondary Roads	2/2024	12/2024*
Planning / Operational Coordination	Incident-related information dissemination to critical partners	Improve the process for CAT initiation and the communication of actions to other VFDs in rural areas.	JCEMA / Secondary Roads / JECC	2/2024	12/2024
Public Information and Warning	Communicating with commercial and passenger vehicles.	Determine thresholds for sending out WEA messages for visitors coming into Johnson County. Additional language capabilities should be addressed. WAZE	JCEMA/IADOT/DPS	2/2024	12/2024
Public Information and Warning / Critical Transportation	Mapping services routing vehicle traffic through closed roads.	GIS needs to partner with Waze to be able to close roads that can be communicated across Waze and Google Maps.	JCEMA/GIS/JECC/	2/2024	12/2024
Planning	Not enough CAT taskforces to cover the county's needs	Revise the CAT SOP and partner relationships to establish more CAT taskforces at additional county sites.	JCEMA/Secondary Roads	2/2024	12/2024*
Mass Search and Rescue Operations / Operational Coordination	Rescuing stranded motorists on snowmobiles placed them in the elements.	Additional enclosed UTVs with tracks are needed in the West, South, and North. Prefer enclosed cabs with tracks. Presently only TFD has a tracked UTV.	JCEMA, JCAS, JCSO, VFDs	2/2024	12/2024
Operational Coordination	Time delay in getting a plow truck when needed for secondary calls overlapping in time at different sites.	V blade plows and winches are needed for brush trucks, or similar vehicles. Prepositioned contracts with private snow removal companies as needed.	JCEMA, JCSO, VFDs & Cities	2/2024	12/2024

Johnson County, Iowa January 2024 Blizzard After-Action Review (AAR)

Core Capability	Issue/Area for Improvement	Corrective Action	Primary Responsible Organization/POC	Start Date	Completion Date
Planning	Use of the existing tracked UTV was delayed due to previous seasonal use and need to dump water.	Revise or develop policy to account for pre-deployment readiness by season for the UTV that carry water in warm months.	VFDs & JCEMA	2/2024	12/2024
Planning / Mass Care	The capacity of non-congregate sheltering options filled up quickly and were near critical levels.	Identify additional preposition contracts for hotel rooms for non-congregate sheltering operations & shelter sites in far areas of county with equipment on site and generators.	JCEMA/Cities, Schools, VFDs	2/2024	12/2024
Mass Care	Not enough congregate sheltering capabilities were able to be opened and had to be adjusted during the incident.	Pre-stage additional shelter cots and carts at the volunteer fire departments in case they have to be used for congregate sheltering when unable to open normal shelters	JCEMA, Cities & VFDs	2/2024	12/2024
Mass Care	No capacity in Lone Tree for congregate sheltering is an issue for any escalating incident.	Identify another congregate sheltering location that can hold a minimum of 25 persons, site a generator & shelter kit there.	JCEMA/City of Lone Tree & School District	2/2024	12/2024
Planning / Operational Coordination	There were some communication challenges with the virtual environment. Consider some staff in house at EOC for limited opening.	Additional assessment may be needed amongst the ESFs to identify the pros & cons of working virtual vs in person. This should be developed as much as possible into a response guide.	JCEMA/Partners/JECC/JCSO	2/2024	12/2024
Public Information and Warning	There needs to be a way to communicate traffic issues to citizens who do not speak English.	Multiple language support on Waze, Iowa's 511 service, and message boards should be explored.	Iowa DOT/PIOs/JCEMA	2/2024	12/2024
Critical Transportation	There are snow gates to prevent vehicle traffic on I35 in Iowa. However, this area of Johnson County could see some additionally installed to shut down roads during winter weather incidents.	Interstate closure gates needed for I-80 and I-380.	Iowa DOT/DPS	2/2024	12/2024



Johnson County, Iowa January 2024 Blizzard After-Action Review (AAR)

Core Capability	Issue/Area for Improvement	Corrective Action	Primary Responsible Organization/POC	Start Date	Completion Date
Critical Transportation	The safety cable barriers for the median completely block traffic and minimize turn-around areas. This prevents trucks and cars from turning around if the road becomes blocked and not near an exit.	Create more cut-out or turn-around locations in the median's cable barrier system.	Iowa DOT	2/2024	12/2024
Operational Coordination	There were times were vehicles could have been pulled with a winch to get unstuck. Stuck traffic just further enhanced backed-up traffic.	Install winches on the highway helper, & other Public Safety trucks to assist with removing vehicles quickly from roadways.	Iowa DOT/JCSO, VFDs/JCEMA	2/2024	12/2024
Operational Coordination	The city only has light-duty trucks to provide safety measures for winter weather operations.	Purchase single-axel dump trucks to maintain roads with chains or on spot chains and sander units for Oxford and Swisher.	Oxford, Swisher	2/2024	7/2025
Operational Coordination	Working with private snowmobile clubs during incidents is difficult without solid pre-identified communication methods.	Identify a way of communicating with the snowmobile clubs during an activation. Explore aps.	JCEMA/ Local Snow Mobile Clubs	2/2024	12/2024
Operational Coordination	Wheels on UTV units are difficult to maneuver during snow events.	EMA and VFD rural UTVs need to purchase tracks for easier snow maneuverability.	JCEMA, VFDs/ JCSO & JCAS	2/2024	12/2024
Operational Coordination	UTVs were at a premium during winter weather incidents where vehicles could not be used.	Oxford, Hills, and Lone Tree need to each have a ATV/UTV with tracks.	Oxford, Hills, Lone Tree	2/2024	7/2025
Operational Coordination / Planning	Rescue equipment was not prepositioned in strategic locations.	Adjust procedures for repositioning the rescue toboggan from JCSO south garage to either Lone Tree or Swisher	JCSO, Lone Tree, Swisher, JCEMA	2/2024	12/2024
Operational Coordination	When transporting stranded motorists, the rescue operation is presenting additional safety concerns and further exposure to the weather.	Sell old UTVs and Quads at Solon, Swisher, and Oxford to get new enclosed units with tracks that can carry stranded people inside.	Solon, Swisher, Oxford, Hills, Lone Tree/JCEMA	2/2024	7/2025
Operational Coordination	Additional consideration for enclosed UTVs.	Sell snowmobile and trailer and either reassign the snowmobile toboggan to a snowmobile club, another EMA, or auction.	JCEMA/VFDs	2/2024	7/2025

Core Capability	Issue/Area for Improvement	Corrective Action	Primary Responsible Organization/POC	Start Date	Completion Date
Operational Coordination	Need additional rescue capabilities.	Use the proceeds of the sale of the snowmobile to purchase a second convertible pull-behind unit that has wheels for moving stretcher patients.	JCEMA	2/2024	12/2024
Operational Coordination	There were times were vehicles could have been pulled with a winch to get unstuck. Stuck traffic just further enhanced backed-up traffic.	Ensure 10,000lb winches are more readily available.	Swisher, Solon, JCSO, and JCEMA/JCAS	2/2024	12/2024
Operational Coordination	Winter weather significantly impairs the capabilities of a low-profile vehicle. Having 4x4 high-clearance ambulance enhances the ability to conduct rescue operations.	Maintain 4x4 high clearance ambulances, trucks and UTVs	EMS Providers & FR groups	2/2024	12/2024
Planning, Organization and Leadership	University of Iowa weather decision-making process	Adjustments in procedures should be made to include the local government in decisions impacting the community.	Tasking outside of the JCEMA's perimeter of control. Work with U of I EM & Athletics on importance of not driving during a blizzard.		

## Appendix B: Participating Stakeholders/Partners

Agency/Organization	Point of Contact
Johnson County Engineer & Secondary Roads	Greg Parker
Johnson County Engineer & Secondary Roads	Kevin Braddock
Johnson County Engineer & Secondary Roads	Ed Bartels
Johnson County Engineer & Secondary Roads	Shannon Smith
Johnson County Engineer & Secondary Roads	Chris Henze
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Johnson County Ambulance Service	Amanda Voss-Grumish
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Johnson County Joint Emergency Communications Center	Joe McCarville
Johnson County Joint Emergency Communications Center	Aubri Montz
Johnson County Joint Emergency Communications Center	Forrest Gerst
Johnson County Sheriff's Office	Brad Kunkel
Johnson County Sheriff's Office	Randy Lamm
Johnson County Sheriff's Office	Matt Hendricks
Johnson County Sheriff's Office	Chris Wisman
Johnson County Public Health	Sam Jarvis
Johnson County Public Health	Nate Savage
Johnson County Medical Examiner	Clayton Schuneman
Johnson County Emergency Management Agency	Dave Wilson
Johnson County Emergency Management Agency	Travis Beckman
Johnson County Emergency Management Agency	Brad Friedhoff
Johnson County Board of Supervisors	Rod Sullivan
Johnson County Board of Supervisors	Jon Green
City of Oxford	Heather Johnson

Agency/Organization	Point of Contact
Oxford Fire Department & First Responders	Jim Hennes
Swisher Fire Department	Bruce Sexton
Iowa Snow drifters	Mike Pickering
University of Iowa	Anna Lumpkin
Iowa Healthcare	Darren Pemberton
Iowa Healthcare	Melissa Jensen
Veteran's Affairs – Iowa City	Edward Riehle
Care Ambulance	Bob Libby
Midwest Medical	Mandi Dickerson
Iowa Department of Transportation	Johnny Shanahan
Iowa State Patrol	Mike McCormick

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