

The purpose of this report is to summarize the findings collected from interviews and other debriefs. The goal of this document is to describe overarching mission and activities, consolidate lessons learned, document best practices and share recommended improvement actions.

Marshall Fire Operational After-Action Report (AAR)

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Summary

The After-Action Review (AAR) process is useful for reflecting upon an incident after its completion, fostering organizational learning, identifying areas of improvement, and learning from successes, challenges and failures. The ultimate goal of the AAR process is to improve response to future disasters.

Conducting the AAR process takes into consideration the complexity of the incident or disaster, and the duration and size of the operational response to design an effective process. The Marshall Fire AAR effort brought together decision makers and tactical resources into targeted AAR discussions to obtain critical elements of information, establish timelines, recount experiences based on areas of effort and extract what went well and what gaps or needs were present. The AAR process focuses on the operational response to the Marshall Fire for the first 12-36 hours.

The AAR begins with an introduction describing the weather conditions and the operational environment that existed at the time of the Marshall Fire. The additional sections provide a timeline of events when possible, highlighting a summary of significant events based upon the input of individuals involved, defining what went well, identifying what did not go well and integrating recommendations into an improvement plan. The improvement plan addresses challenges that were faced or actions that did not go well. The gaps identified can be addressed through planning efforts, applying organizational capacity, dedicating resources, providing equipment, staffing, training and developing exercises to test and evaluate effectiveness of improvements made.

The improvement plan design identifies the capability area, observations from participants about what did not go well, and corrective action recommendations, and it identifies the lead agency, the name of the responsible person to lead the corrective action and a time for completion. The lead agency and person are responsible for facilitating or leading the corrective action program or process. Most if not all corrective action programs and processes identified in this report require the involvement of multiple jurisdictions and the engagement of their leadership, operational supervisors and personnel to be successful. Implementing the improvement planning effort is the most important step in the AAR process for continuous improvement to be successful in addressing gaps.

The After-Action Review provides analysis for lessons learned, best practices and recommendations for future planning, training, and exercise development. As improvement actions are identified and addressed, it is important that any relevant plans, policies and procedures are updated accordingly.

Introduction

Summary of the weather conditions for the Marshall Fire on December 30, 2021.

https://www.weather.gov/bou/HighWinds12_30_2021

On Thursday, December 30, 2021, the devastating Marshall Fire roared through unincorporated Boulder County, Superior and Louisville, Colorado. The fire started south of Boulder, Colorado and was fanned by intense winds along the Front Range Foothills. Wind gusts from 70 to 100 mph occurred right at the base of the foothills, including in Boulder and along Highway 93 south toward Golden. The strong winds fanned a destructive grass fire which originated near Marshall in unincorporated Boulder County, and then quickly spread east to Superior and Louisville. At last count, the Marshall Fire destroyed 1,084 homes, and seven commercial structures and damaged 149 homes and 30 commercial structures.

The very strong winds developed in the mid-morning hours on Thursday as the result of a mountain wave that developed from very strong westerly winds racing over the Front Range Mountains and Foothills. The mountain wave remained nearly unchanged through the rest of the day, resulting in very persistent and extremely high winds that was focused very close to the base of the foothills, along Highway 93 and points east to around Superior and, Louisville. It takes just the right combination of meteorological parameters, including stability, wind shear, and wind magnitude, to create a powerful and damaging windstorm like this one.

The second component that contributed to this disaster was the lack of precipitation during the latter half of 2021. The Front Range experienced a very wet first half of the year with much greater than normal precipitation and lush and tall grass growth. However, starting around July, a persistently dry weather pattern set up and held firm through the entire fall and early winter. Grasses, while typically dry this time of year, were exceptionally dry as very little snow had occurred through the entire fall season. The temperature and precipitation from July 1 through December 29 ranks as the 2nd warmest and by far the driest in the Denver's recorded history (since 1872). This same time period for Boulder was ranked 2nd warmest for precipitation, while 13th driest in recorded history.

Prior to the Marshall Fire

At 10:15 a.m. the Lefthand Fire Protection District responded to the Middle Fork fire north of Boulder, and the weather conditions and high winds caused rapid growth of that fire. The Middle Fork fire attracted multiple fire departments from Allenspark, Hygiene, Lyons, Boulder Mountain Fire Protection District, and Boulder County Sheriff Fire Management Team to provide fire suppression and 15 Sheriff's Office Deputies to evacuate residents in the area. First responders reported fire spreading quickly with high winds as they started to engage in fighting the fire and initiating evacuations. The Boulder Incident Management Team (IMT3) was requested and responded to the scene. The 911 center was receiving hundreds of calls reporting the fire and launching emergency notifications through the Everbridge system to residents. An evacuation site was established in Longmont at the Memorial Building for

evacuees of the fire. The Boulder Emergency Operations Center was not activated, but two staff members were supporting the IMT3 call out process and evacuation site efforts.

The City of Boulder Fire Department also was fighting wildfires during this time and into the afternoon along their western flank of the city.

The Marshall Fire Begins

At 11:05 a.m. the Boulder County Sheriff's 911 Center dispatched Mountain View Fire Protection District and Sheriff's Office Deputies to a line down near Marshall Road and Eldorado Springs Road. A fire had developed near that same area, and it spread rapidly in cured grass fuels (dry grass materials) with relative humidity around 20% and winds up to 100 mph. The fire, now known as the Marshall Fire, began consuming structures almost immediately. Resources were directed from the Middle Fork Fire at 11:15 a.m. due to the Marshall Fire starting. Fire crews discovered a shed on fire in the area and begin to attack the fire. The fire was spreading in other areas, but the spread initially was not detected because the wind was causing a tremendous amount of smoke, dirt, dust, and debris that concealed the fire's growth and direction. Once crews determined that the fire was spreading east, the fire attack broadened. Law enforcement began to call for evacuations immediately and started the door-to-door evacuation process. At 11:30 a.m. the Emergency Operations Center started to open, and notifications were made to Emergency Support Functions to activate for the Marshall Fire.

Evacuations were being done by deputies and fire firefighters in the area of Marshall Road, 76th Street, and Cherryvale Road. The 911 center saw a large increase in calls to report the fire and in calls for assistance. As the fire progressed towards the town of Superior and the large commercial area around Costco and Target, it was evident that the fire was going to significantly impact Superior and appeared likely to directly impact the city of Louisville. At 2:30 p.m., evacuation of Avista Hospital began. Evacuations continued, and coordination between the IMT3 and the Boulder County Law Branch was critical for successful evacuation of residents. As the evening continued, the devastation further extended into the town of Superior and the city of Louisville.

There were two fatalities during the Marshall Fire, one in the Marshall area and the other in the town of Superior. Both fatalities had been contacted by law enforcement during the evacuation process and advised to leave.

At approximately 6:30 p.m., the wind decreased to 25-30 mph and the fire behavior decreased in intensity and rate of spread. High winds continued into the evening, and by the morning of December 31 fire size was estimated at 6,000 acres.

The morning of December 31 brought a significant weather change: winds were less than 10 mph and snow was forecast for later in the day. The afternoon brought four to eight inches of snow which effectively stopped all forward spread of the wildland fire.

Summary of Events of the Operational Response

1024: Middle Fork starts and is drawing in fire resources and 15 deputies. Fire spreading quickly with high winds reported.

1105: Marshall Fire call is dispatched.

1123 Fire Command requests additional units to Marshall Fire. Fire moving east through property to homes.

1138: Evacuations start in Old Marshall and along Cherryvale north.

1150: Cherryvale Law Units begin evacuating South Vale and Wildflower Ranch.

1159: Fire begins running east down Marshall Rd. Middle Fork Incident Command calling for resources.

1200: BCSO fire command and law command tie in together and operational coordination established. Relocated ICP to 76th Street and Marshall Road.

1203: Fire is reported past water treatment plant moving at rapid rate toward Superior.

1206: Start evacuations for S 76th Sagamore, and Costco area. Flames reported at the back of Sagamore subdivision.

1215: Evacuation Orders issued through Everbridge system to unincorporated Boulder County and Superior and went to McCaslin. Door to door evacuations initiated for the next 30 minutes in the area.

1218: Costco evacuating, and fire is at Mohawk. Fire in parking lot of Costco and smoke obscuring everything.

1219: Flames have reached Sagamore.

1235: Mountain View Fire Department calls for Spanish Hills evacuations. Fire is there before evacuations.

1241: 911 Center started airing home addresses and was overwhelmed with reports.

1245: Fire reported behind Home Depot in Louisville.

1246: At 68th and South Boulder reports of fire in the area.

1250: Call for evacuations south of South Boulder Road also SCL Hospital evacuation, and McCaslin East to Sports Stable needs to evacuate.

1250: Decision is made to evacuate the entire town of Superior.

1256: Flatirons Mall contacted, and work started on getting access to use Nordstroms (closed/moved out) to take shelter from wind and set up ICP while waiting for Mobile Command Post.

1300: Law Division is established at Flatirons Mall. Teams are designated from arriving outside agencies for full Superior evacuation.

Teams of 10 are assigned radio designators of A-P and assigned to one of three tasks; Evacuations (overall evacuations of large areas), Critical or Tactical Evacuations (people needing help or in areas that had already been evacuated), and Road Closures/ Traffic control (including areas in Louisville).

1308 Louisville running operations and door to door evacuations.

1315: Mobile command post at the Flatirons Mall and the Law Branch was established boosting incident command from IMT3.

1402: Teams assigned to flush traffic eastbound only, at US36/ McCaslin and Rock Creek Pkwy/Coalton. Mountain View Fire assigned to help with evacuations at Urgent Care and then Avista.

1500: IMT provided planning, resource status, situation status, logistics, check in with divisions and branches, coordination with evacuation planning.

1520: Delegation of management of the fire to the Sheriff.

1530 Entire town of Superior Evacuated.

1537 Boulder Police SWAT Team assigned to assist Louisville with evacuations and began evacuating Zones 1, 2,3,4 and set their own staging at Monarch High.

1540: Delegated the fire to IMT3 as the Incident Commander.

1600: Delegated the fire to the state, evacuations and firefighting continuing.

1900: Wind shifting and making progress and the system started to catch up to the incident. South Metro Fire, North Metro Fire, Jefferson County Communication, State Emergency Operations Center and CO Division of Fire Prevention and Control all ordering resources.

2000 to 0700: The weather conditions are notably changed from the prior 9 hours. Fire crews continue to fight fires through the night. Evacuations continue door to door by law enforcement. Site access control planning begins to control access. BIMT continues to manage the incident and orders resources for the next day and completes incident action planning.

What Worked Well

Interagency Cooperation.

- Instructions and assignments were clear, and personnel knew exactly what was supposed to be done and were able to stay on the tasks at hand.
- Communications between multiple law agencies was effective because law enforcement had clear and concise information. Agencies used Law channel and cell phones for communication.
- Relationships with other agencies worked well. Pre-existing relationships, either from working on prior incidents together or through previous interactions, were great and key to operational successes.
- During extreme conditions and hardships not encountered on other incidents the commitment to work well together from all agencies was experienced throughout the operation.

Incident Command

- Establishing unified command by law enforcement with fire departments early on in both incidents increased effectiveness in making operational decisions and use of resources.
- Utility company presence and the development of a strong interface with the incident command post was effective in controlling utilities in the area, making it safe for first responders.
- IMT3 deployment and assumption of command added capacity to manage the complexity and escalation of the incident until the FEMA IMT1 team took the fire on January 1, 2022

Operational & Resource Management

- Assembling resources quickly and handing out assignments (from Longmont Police SWAT and Boulder Police SWAT) was critical to the effective door to door evacuations.
- Radio discipline within the law enforcement groups was excellent and prevented overloading operational channels preventing radio network failures. Personnel saved radio traffic for important information.
- There was great initiative. Numerous people saw a problem and took it upon themselves to rectify the situation as opposed to having to be ordered to. The ability to make decisions and resolve issues at the point of the problem created many operational successes and resolved significant challenges encountered throughout the incident.
- Diverting law and fire resources quickly from the Middle Fork Fire to the Marshall Fire assisted with bolstering the response to the Marshall Fire as resources were becoming scarce awaiting additional resources to arrive.
- The loss of life in any disaster is hard to accept, and tragically two people did lose their lives. Due to the speed of the fire spreading into multiple communities simultaneously the potential for many fatalities was present and fortunately did not manifest during this incident.
- Over 1,100 homes and businesses were lost in this fire, but thousands of homes were saved because of firefighting efforts.

Evacuations

- The initial alerts and warnings for the Middle Fork Fire and the Marshall Fire went out quickly and roadblocks were established immediately.
- Door to door evacuations needed to be executed immediately into the response and quickly throughout the Marshall Road 76th Street area. This included many residents and animals.
- Over 300 law enforcement resources assembled to perform door to door evacuations in Superior, Louisville, and unincorporated areas of Boulder County.
- The fire spread was so aggressive that in three locations it jumped Highway 36, which is a six-lane divided highway. The fire caused a traffic jam requiring all traffic to be re-routed by law enforcement.
- Traffic congestion was resolved at Coalton/Rock Creek by sending everyone east from Coalton in all lanes to Highway 36. This cleared out traffic jams in Rock Creek.
- Avista Hospital had to be evacuated in a short period of time due to the rapidly advancing fire. Through coordination of multiple agencies, evacuations were able to remove patients to other facilities. There was a phone call directly from an Avista Nurse (inquiring about evacuating the hospital). Having direct contact with employee from the facility provided real-time situational awareness for understanding the fire nearby. Due to information provided, the dispatcher advised to evacuate if in danger—same message provided to many callers.
- Multiple long-term care facilities also had to be evacuated at the same time. Residents were moved to other facilities due to effective facility emergency planning and transportation resources provided by ESF 1 Transportation.
- Additional dispatch staff brought into backfill, then identified a single dispatcher to manage evacuations and Everbridge.
- The Flatirons Crossing Mall provided a staging area large enough to support over 300 law enforcement personnel, 74 fire agencies and hundreds of fire personnel. This permitted an efficient incident base and operating space for the incident management teams operating the incident command post.
- The fire was moving faster than some of the evacuation orders could be developed and launched. Social media use by the community and messaging between the Town of Superior and City of Louisville assisted to provide messaging on social media about the fire.
- Communications to fire command was excellent between the 911 center to obtain information and relay critical updates.
- The evacuation of 37,500 people during a fast moving and multi-directional spreading fire in a relatively short period of time (3-4 hours) is unprecedented.

Communications/ 911 Center














The Sheriff's Communication Center provides dispatching services for all law enforcement agencies in Boulder County except the City of Boulder, University of Colorado, and the City of

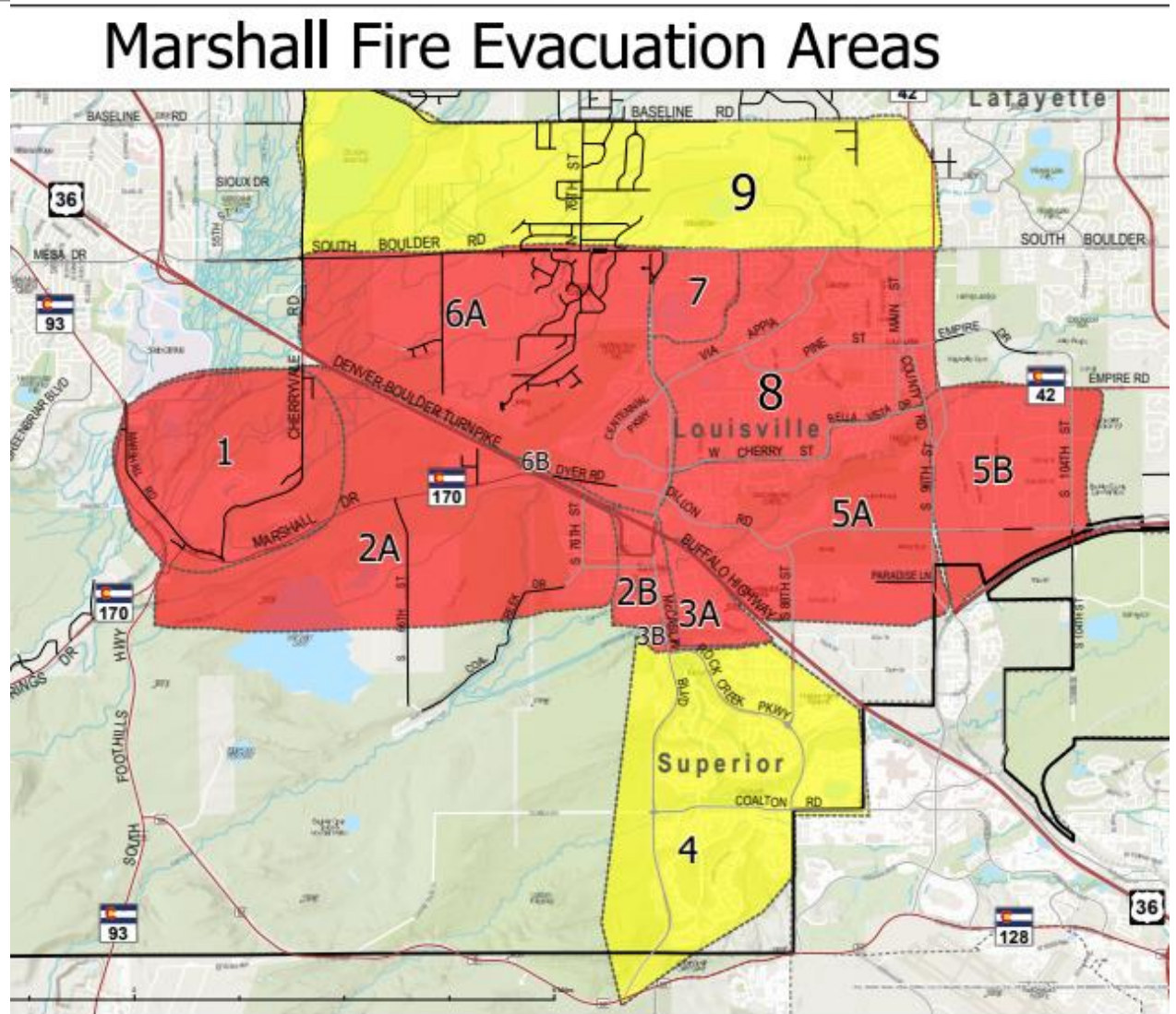
Longmont. In addition, the center also provides 911 dispatching and alert and warning services for fire agencies and rescue agencies in Boulder County. The 911 services and dispatching services for the Middle Fork Fire and Marshall Fire were managed through this center. The Middle Fork Fire already had supervisors of the communications center starting to arrange for additional staff due to the size and hazardous nature of the fire.

The additional staffing was present or was already enroute, due to the dispatch all-page sent for assistance during the Middle Fork Fire. Having these additional dispatchers added capacity by adding multiple fire dispatchers and one supervisor working the incident facilitated splitting roles and responsibilities. Back-up staff to assist with Computer Aided Dispatch for Fire and Law channels were also made available.

There was strong room awareness by dispatchers, considering we were working in a temporary location with less than half the space and different layout and consoles available. Incoming additional dispatchers knew where to go and who to back up. Additional supervisors were also available to make decisions and assist with dispatching, making concise and appropriate instructions to callers, specific to each situation.

Marshall Fire Evacuations Zones

	Marshall Fire 1 - Evacuation Order: 12/30/2021 (11:47 AM)
	Marshall Fire 2A - Evacuation Order: 12/30/2021 (12:15 PM)
	Marshall Fire 2B - Evacuation Order: 12/30/2021 (12:15 PM)
	Marshall Fire 3A - Evacuation Order: 12/30/2021 (12:46 PM)
	Marshall Fire 3B - Evacuation Order: 12/30/2021 (12:46 PM)
	Marshall Fire 4 - Evacuation Warning: 12/30/2021 (12:49 PM)
	Marshall Fire 5A - Evacuation Order: 12/30/2021 (1:08 PM)
	Marshall Fire 5B - Evacuation Order: 12/30/2021 (1:08 PM)
	Marshall Fire 6A - Evacuation Order: 12/30/2021 (1:15 PM)
	Marshall Fire 6B - Evacuation Order: 12/30/2021 (1:15 PM)
	Marshall Fire 7 - Evacuation Order: 12/30/2021 (1:25 PM)
	Marshall Fire 8 - Evacuation Order: 12/30/2021 (2:51 PM)
	Marshall Fire 9 - Evacuation Warning: 12/30/2021 (2:58 PM)



Fire Response AAR Improvement Plan

Capability	Observation	Corrective Action Recommendations	Primary Responsible Agency	Agency POC	Start Date	Completion Date
Incident Command	Agency administrators were unfamiliar with the delegation process. Incident management team (IMT) Incident Commanders did not fully understand the multiple authorities and how to negotiate the relationship at times.	Agency administration meeting and training	Boulder Disaster Management	Mike Chard 303-565-7878 mchard@bouldercounty.org	May 2022	August 2022
Communications	Need to optimize communications between incident command and dispatch.	Facilitate operational discussion between Incident Command and Dispatch	Fire Consortium-Operations Committee	Boulder County Fire Chiefs (BCFC) Representatives and Steve Silbermann	TBD	TBD
Resource Management	County dispatch – resources, contact information	Verify all resources are properly listed in the dispatch centers and appropriate contact information is present.	Fire Consortium-Operations Committee	Bradshaw, Higgins, Beebe, BRETSA	May 2022	In Progress
Operational Coordination	Fire duty officer / Local resource coordinator (LRC)	Determine how to best staff this position and determine duties.	Fire Consortium-Operations Committee	BCFC Representatives to be determined. Office of Disaster Management Resource Management Section Chief	May 2022	In Progress
Planning	Structure Annual Operating Plan (AOP) model	Develop a structural model for response in the AOP for fires that start in wildland	Fire Consortium-Operations Committee	Seth McKinney and Brian Oliver	TBD	TBD

		/grasslands and move into urban structure environment				
Interoperability	Local 800 MHz communications plan-	Need to develop a Vhf and 800 MHz communications plan.	Radio / Communications Team	Scott Whitehead		April 2022

Law Response AAR Improvement Plan

Capability	Observation	Corrective Action Recommendations	Primary Responsible Agency	Agency POC	Start Date	Completion Date
Communications	Communications/ 800 communications plan	Develop 800 MHz Communications Plan	BCSO	Whitehead/ Wilber	April 12, 2022	April 2022
Operations	Rescue Task Force model for evacuations	Build Rescue Task Force model – a dedicated group that contains law enforcement, fire, and EMS that can be tasked as a group to handle projects/issues within the incident.	BCSO	Bonafede/ Wilber	April 12, 2022	In Progress
Incident Command	Consolidation of Incident Command/ Operations Directors earlier	Evaluate standard operating procedures (SOPs) and adjust support unified command or enhance command coordination earlier.	BCSO	Chamberlin / Wilber	April 12, 2022	In Progress

Evacuations	Controlling and maintaining intersections/ traffic flow	Ensure current evacuation policies and SOPs consider evacuation traffic patterns and cover traffic control objectives.	BCSO	Heathman	April 12, 2022	In Progress
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AAR Improvement Plan Alert & Warning

Capability	Observation	Corrective Action Recommendations	Primary Responsible Agency	Agency POC	Start Date	Comp. Date
Emergency Evacuation Orders Using IPAWS	Evacuation orders or incidents involving imminent or immediate risk to life safety need to be managed by the 911 centers.	Wireless emergency alerts (WEA) /IPAWS integrated into 911 centers for use in immediate life safety situations.	911 Centers, ODM	Brian Zierlein, Steve Silbermann, Brad Riggins, Mike Chard	2021	April 2022
Multi-jurisdictional decision making	During a fast-moving incident having pre-established decision-making agreements will help with alert and warning challenges during response.	Hold meetings to develop agreements, or operational sop integration, or processes to facilitate multi-jurisdictional decision making.	Law Enforcement, Fire Agencies, 911 Centers, Disaster Management	Steve Silbermann & Mike Chard	May 18, 2022	Ongoing
Emergency Notification Database	Develop a database management policy or process within the Boulder Regional Emergency Telephone Service Authority (BRETSA) structure	Develop a database management policy or process with BRETSA 911 Centers that share the Emergency Notification System	BCSO	Steve Silbermann	June 2022	TBD
Polygons County Wide-911	Polygons exist west of HWY 36 and need to be expanded to other communities in the County East of Hwy 36 / 93.	Develop evacuation polygons for each community in Boulder County using existing systems or acquire proprietary software. Explore software options.	BCSO BPD 911, Longmont 911 Fire and law agencies.	911 center directors	APRIL 2022	TBD

Complex Escalating Response Environment-	During a rapidly escalating incident the ability to implement the concepts of unified coordination / command, staging and how to identify escalation is critical.	Need to continue to expand unified command process, how to manage escalation, staging and resource management.	BCSO, BCFFA, BCFC, Chiefs group	Josh Bonafede, Ops, Emergency Services, Fire Crew, 911 center.	May 2022	October 2022
Integrating with municipality Emergency Mangers & first responders to review alert and warning plan and evacuation planning for imminent life safety incidents.	Being able to leverage the local municipality emergency managers to assist with development of evacuation polygons and processes is needed.	Hold evacuation planning meetings and tabletop exercises with local municipal emergency managers and public safety leaders from each community.	Office of Disaster Management (ODM), 911 centers, fire and police agencies, local municipal emergency managers.	Mike Chard, Steve Silbermann, Brad Riggins, Kristine Mason, Longmont OEM, Kim Stewart, Pete Bradshaw, Dave Hayes, & BCSO	May 2022	September 2022
DHSEM Having Alert and Warning Support (IPAWS) Capability with the Boulder Sheriff 911 Center	During the fire Division of Homeland Security and Emergency Management (DHSEM) suggested they could assist to launch a WEA. Not acted on because no prior planning or ability to integrated with geotargeted evacuation zones.	Develop an agreement, process, and exercise cycle to develop and implement this capability with the DHSEM.	IPAWS Collaborative Operations Group (COG) Administrator 911 Center	ODM- Chard mchard@bouldercounty.org , 303-565-7878 911 Center- Steve Silbermann	2022	TBD

			DHSEM Field Manager	Kevin Keturich		
Siren activation	Sirens were not activated by first responders, sirens in area do not have a wildfire program installed.	Review siren use and activation process with first responders. Review with agency administrators if the siren programming needs to change.	ODM, BCSO, Towns and Cities, Fire Depts, Law	Mchard- mchard@boul dercounty.org 303-565-7878	2022	May 2022
Messaging	Create plan for multi-lingual messaging for alert and warning.	Explore funding for technical solutions during active messaging and translation services for outreach materials.	Dispatch and ODM	Steve Silbermann, Brian Zierlein, & Mike Chard	2021	Ongoing

AAR Improvement Plan Sheriff 911 Communications Center

Capability	Observation	Corrective Action Recommendations	Primary Responsible Agency	Agency POC	Start Date	Comp. Date
Alert and Warning	Develop policy surrounding alert and warning activation which allows for some autonomy of dispatchers to launch warnings if field units are too busy to request or cannot be reached.	Develop alert and warning agreements or procedures to streamline approval process	Dispatch, Operations Division and Fire Agencies	Brian Zierlein	January 2022	April 2022
Alert and Warning	Always have 1 dispatcher available for Everbridge/IPAWS launches.	Increase staffing (long term) and increase those trained (near term) to have this position in the 911 center	Dispatch	Brian Zierlein	2021	April 2022 and July 2022 for near term goal
Alert and Warning	Need to identify a consistent communication flow when Law and Fire ICs are not unified or making decisions in from the same location. Dispatch would get differing requests from Fire or Law resources. A proper ICS structure that supports efficient decision making and requests emergency notifications	Conduct escalating incident exercises with an emphasis on process development to ensure better operational coordination and or unified command.	Operations, ODM, & 911 centers	Steve Silbermann, Brian Zierlein, law and fire operations representatives & Mike Chard	May 2022	Ongoing

<p>Operational Coordination</p>	<p>Review and develop processes for Info flow between LE Command Personnel on site and actively working dispatch alert and warning personnel. [NOTE: due to the temp location for dispatch, Law Enforcement Command Personnel could not fit in dispatch. Typically, they work from the dispatch floor]</p>	<p>Dedicate a liaison with IC structure within dispatch</p>	<p>BCC</p>	<p>Brian Zierlein & Steve Silbermann</p>	<p>June 2022</p>	<p>July 2022</p>
<p>Alert and Warning</p>	<p>Develop policy surrounding alert and warning activation which allows for some autonomy of dispatchers to launch warnings if field units are too busy to request or cannot be reached.</p>	<p>Develop alert and warning agreements or procedures to streamline approval process</p>	<p>Dispatch, Operations Division and Fire Agencies</p>	<p>Brian Zierlein</p>	<p>January 2022</p>	<p>April 2022</p>

Louisville Fire and Police

Significant Events Fire

Early in the incident, visibility was extremely poor due to the high winds, dust, debris, and smoke. The scene was dynamic with lots of hazards to civilians and responders. It was challenging locating the fire at first, and once structures were involved, it began to grow exponentially. The heat coming off houses was amplified by the winds and hard to get a really good idea of what exactly was on fire and how to mitigate the spread. Crews reported that it seemed like every time they were feeling good about making a stop, a house down the street caught fire and potentially left them in a spot that would make their egress out of the area risky.

Initial responding crews describe the initial scene as chaotic saying that it was clear that the incident had exceeded their ability to control it early on. The fire was moving so fast that the wind reduced visibility and the ability to fight the fire significantly. There was nothing that could be done to stop it even with additional resources.

Conditions were deteriorating, with wind and heavy smoke in the area. As crews crossed over US 36 on McCaslin heading west, visibility was next to zero and they could not see the road or fire units responding in front of them. A decision was made to turn around and directed to go put out a small grass fire south of the skate park. This was around 1230 hours.

For a short time, traffic was blocked heading west on Via Appia in front of Station 2, and then a fire crossed the field toward Station 2. Crews ordered to drive into the field and deployed lines to fight the fire and efforts were successful.

Louisville Fire Protection District (LFPD) was advised by Chief Officers in the area to proceed to the area southeast of Louisville Station 2 and knock on doors to ensure homes had been evacuated. Upon arrival in the area near Pine Street and Nighthawk Circle and knocking on several doors, it appeared that the area had been evacuated. Crews did find a few citizens in the area, and all evacuated after being told to leave the area. It was determined that evacuations could be done in areas facing greater threat.

Louisville Fire units joined up with a wildland engine from Sable Altura and a Boulder Rural engine. Crews deployed wildland hoses and began fighting fires in the yards of houses along Trail Ridge Drive. The wind was so strong, it was difficult to stand up straight or open vehicle doors, etc. The crews put out small fires in yards, on decks, on fences, trees, but efforts were overcome. When conditions became too bad, crews moved with the strike team back a block.

Visibility was near zero continually, and responders feared striking parked vehicles. There were many times reported where crews were not sure where they were or what was their escape route. Crews encountered loss of water supply while handling multiple structure fires during the incident.

LFPD crews spent several hours driving on trails between houses in the neighborhood north of Station 2, putting out fires in yards and porches, while the rest of the strike team was hitting the fronts of the houses. Considerable time was spent putting water on the burning house at the northwest corner of W. Pine and Via Appia to keep the fire from spreading to other houses, which was successful.

Fire crews operating primarily between McCaslin and Tyler, north of Via Appia, reported that they experienced winds pushing fire from west to east at a high rate of speed. Homes and open space were burning quicker than crews could keep up with the fire spread.

In the Hillside Area, it was extremely windy, and the fire was blowing into back yards and crews were putting out hot spots. Multiple houses ignited, and the whole neighborhood was fully involved as crews shifted to evacuating the area. Fire crews experienced similar conditions the rest of the day at Cherrywood Street 2, and Mulberry. The wind finally calmed down late into the evening, and the crews were able to provide enough structure protection to stop the fire from advancing further down the street.

As fire crews progressed through the day, it became clear that being close to a hydrant and utilizing multiple master streams was the only effective tactic that even slowed the progression of the fire.

Winds died down around 2000 hours. Once the wind was reduced and other resources had arrived, crews were able to start making noticeable progress on the fire. At this point, limited relief crews, food, and other support resources started to become available.

Significant Events Police

Once notified of the fire, the Police Chief initially set up a command post in the briefing room staffed with a small number of other Police staff, and staff from Planning and Building Safety.

The Police Division Chief responding observed that the fire and smoke on Hwy 36 was extreme. Upon arriving in the City, the Police Division Chief immediately took command of law operations in Louisville. It took some time to get an appraisal of the situation and status of staffing. Initial objectives began with managing area and welfare checks. The fire had crossed Hwy 36 and spot fires were beginning to appear in Louisville and radio traffic was continuous. Officers began to report multiple structure fires. It was believed that the fire was moving northeast but other reports indicated the fire was traveling east on the north side of the city.

As the fire progressed in Louisville, the Police Chief had many conversations with Boulder County Communications Center staff regarding evacuations based on what was being reported regarding fire spread. The PD was working with BC Communications Staff to draw evacuation polygons (geographic areas) and execute the evacuations. The City was attempting to synchronize communications regarding evacuations with Boulder County Communications, but there were challenges in understanding timing around execution of evacuations. The Police Department was evacuating certain areas and setting up a command post at the King Soopers.

The Police Chief and City Manager made the decision not to evacuate all areas within the city immediately, but to phase them in an effort to limit traffic congestion. During the event the roadways did not have capacity for a city-wide evacuation without a staging component.

Communications on the radio was nearly impossible. Cell phone communication also proved to be difficult as cell towers quickly became overloaded, and calls did not always go through in timely manner.

Additional police resources were requested from Longmont Police for traffic control along South Boulder Road as evacuations were occurring. Police resources were directed to assist with evacuation traffic and Via Appia and eastbound South Boulder Rd was gridlocked. With the help of Longmont and Lafayette Police, direction was given to use any means necessary to allow traffic egress out of the city. The only avenues free from fire, at the time, was eastbound South Boulder Rd, eastbound Empire Rd, and eastbound Dillon. Several Larimer County Sheriff's Deputies were working notifications and door to door evacuations in the south end of the city directed by a command post that was set up in the Monarch High School parking lot. Later LPD staff made it the Flatirons Mall to work on unifying command.

What Worked Well

- People just showed up and made it work. Police patrol and professional staff were asked to complete tasks never assigned or trained for prior to the incident.
- Solid and safe decisions were made throughout, with no major injuries.
- Strong leadership made smart decisions, explained strategy, and kept personnel safe.
- Fire Station 3 - fire fighter rehabilitation was well stocked and organized
- Working with other agencies that we have never interacted with prior went very well.
- All crewmembers voiced their opinions on tactics, strategies, and safety, which helped everybody be on the same page.
- Decentralized decision-making was key to success during the fire. Radio communications were limited and being able to make decisions that were best for the community without prior approval was important. Able to communicate the "Leader's Intent" and allow line level leaders to innovate options to complete given their more informed position of conditions.
- 800 Radio system seemed to be strong with little gaps in coverage.
- No loss of life in Louisville.
- Many evacuations conducted including transport of individuals without transportation and those with special needs
- Door to door evacuations present throughout the incident. Strong coordination in the field and on the ground as door-to-door evacuations were rolled out.

- Traffic management assistance was requested and arrived quickly to provide some relief from evacuation and road-closure related congestion.
- Local staffing levels were adequate and surge resources came in quickly from regional law enforcement and fire agencies.
- Social media played a role in alerting people quickly of fire presence and need to evacuate.

AAR Improvement Plan City of Louisville

Capability	Observation	Corrective Action Recommendations	Primary Responsible Agency	Agency POC	Start Date	Comp. Date
COOP	No predetermined roles/expected actions for admin staff of PD and Fire Departments.	Develop staffing roles and procedures for administrative staff to support incident response.	Louisville Police and Louisville Fire	Chief Dave Hayes and Chief John Willson	July 2022	TBD
COOP	No plan for employee callbacks for Fire Department or Police Department. Those off duty did not know who to call or where to go. Police Department roster is continually changing but we have no current guidelines when more/all staff should be called in.	Develop call back procedures for Police and Fire staff.	Louisville Police and Louisville Fire	Chief Dave Hayes and Chief John Willson	July 2022	TBD
Operational Coordination	No defined strategy for the incident due to the rapidly unfolding event. The mission was never defined for Police and ranged from evacuations, welfare checks, to traffic control.	Develop rapidly escalating incident policy procedures and training program.	Louisville Police and Louisville Fire	Chief Dave Hayes and Chief John Willson	July 2022	TBD

Equipment	Inadequate Personal Protective Equipment (PPE), including eye protection and other protective gear necessary for the conditions encountered by both Fire and Police.	Assess personal protective equipment needs for response to high wind fire incidents and purchase.	Louisville Police and Louisville Fire	Chief Dave Hayes and Chief John Willson	July 2022	TBD
Equipment	No supply of sustenance (i.e., water/snacks at the stations to take along in rigs) to prevent exhaustion of firefighters and officers over the long duration of intense response activities. Patrols cars should be outfitted with "rehab" bags.	Need to create a 24-to-72-hour sustainability plan and purchase required supplies and equipment.	Louisville Police and Louisville Fire	Chief Dave Hayes and Chief John Willson	July 2022	TBD
Incident Command	Communication throughout the event was difficult. Numerous agencies using multiple radio channels, and multiple phones and other communication channels allowed for information to be missed.	Develop a radio plan for large scale incidents for police and fire departments.	Louisville Police and Louisville Fire Boulder County Communications Center	Chief Dave Hayes and Chief John Willson	July 2022	TBD

Operations	An earlier shift from firefighting to mass evacuations could have provided homeowners more time. However, with the fire jumping and not knowing the extent of each individual fire, firefighters were challenged in knowing where to evacuate first.	Provide controlled and specifically identified evacuations and communicate them clearly through multiple channels.	Louisville Police and Louisville Fire	Chief Dave Hayes and Chief John Willson	July 2022	TBD
Mitigation	Develop an understanding of the role and conditions of public lands and open space, and how that may impact emergency response for future events.	Participate in land management meetings and engage in mitigation planning.	Louisville Fire Department and City of Louisville Parks Department	Chief John Willson City Manager's Office	TBD	TBD
COOP	Keep COOP (Continuity of operations Plan) updated and relevant for a variety of events.	Update existing COOP for all departments	City of Louisville, Louisville Police and Louisville Fire Department	Emily Hogan Chief Dave Hayes, Chief John Willson	July 2022	TBD
Public Information	Be prepared to develop consistent messaging to the community, a strategic communications plan, a point of contact and a crisis communication plan. Ensure	Develop crisis communications plan and Public Information Office (PIO) plan.	City of Louisville, Louisville Police and Louisville Fire Department	Chief Dave Hayes, Emily Hogan, Chief John Willson	July 2022	TBD

	communication coordination points are in place.					
Public Information	PIO/ dedicated media contact appointed for disasters that can work across agencies (Fire and Police/City of Louisville).	Identify field PIO for Police and Fire Department.	City of Louisville, Louisville Police and Chief John Willson	Chief Dave Hayes Emily Hogan, PIO Chief John Willson	July 2022	TBD
Evacuation Communications	Need for communication from Boulder County Communications once evacuations are launched so the City can also push out the evacuation information immediately.	Identify primary points of contact for direct PIO during events. Establish communication protocols for when evacuations are launched through Boulder County Communications.	Boulder County Communications Center, City of Louisville, Louisville FD	Emily Hogan, PIO, Police Department, Fire Department	July 2022	
Evacuation Communications	Need for timely and coordinated communication channel updates regarding launch of evacuation orders (Boulder County ODM webpage, City of Louisville webpage, agency social media posts, etc.)	Identify primary points of contact for communication channel updates during events.	Boulder County Communications Center, City of Louisville, Louisville FD	Emily Hogan, PIO, Police Department, Fire Department	July 2022	TBD
Alert and Warning	Create pre-drawn evacuation area “polygons”, or distinct geographic evacuation areas that can be executed when a rolling/partial evacuation of the city is necessary.	Create a polygon system for Louisville for evacuation planning and response.	City of Louisville, Louisville Police and Louisville Fire Department	Chief Dave Hayes Ms. Emily Hogan Chief John Willson	July 2022	July 2022

<p>Evacuation</p>	<p>Understand alternative evacuation route options based on potential disaster locations and associated traffic congestion impacts.</p> <p>Establish Public Safety Priority to prevent overcrowded cell towers-need during a disaster.</p> <p>Pre-prepare mass evacuation plan including control over traffic lights.</p> <p>Establish clear evacuation protocol and notification between Louisville Fire Department and Police Department/City of Louisville.</p>	<p>Develop an evacuation and traffic plan for Louisville.</p>	<p>City of Louisville, Louisville Police and Louisville Fire Department</p> <p>FirstNet or Verizon</p>	<p>Chief Dave Hayes Ms. Emily Hogan Mr. Chris Neves Chief John Willson</p>	<p>TBD</p>	<p>TBD</p>
<p>Incident Command</p>	<p>For large scale events, set up joint command with Louisville Fire.</p> <p>Define span of control and command structure in multi-agency event.</p> <p>Issue occasional "Recap/Status Reports" by dispatch to keep everyone on the same page.</p>	<p>Develop a large-scale incident command plan, provide training, and conduct exercises and drills.</p>	<p>City of Louisville, Louisville Police, and Louisville Fire Department</p> <p>Tabletop Exercise planned for June 2022</p>	<p>Chief Dave Hayes and Chief John Willson</p>	<p>July 2022</p>	<p>TBD</p>

	Police and Fire to share daily line-ups with each other, including contact numbers to allow for single point contacts.					
Wellness	Mental Health/ self-care for employees, accessible during an event. Contact List/ Point of contact to stay in touch with significant others/ spouses.	Develop a rehab program for staff and a family and friends support network.	Louisville Police and Louisville Fire Department	Chief Dave Hayes and Chief John Willson	July 2022	TBD
Communications	Establish Public Safety Priority to prevent overcrowded cell towers-need during a disaster.	Contact First Net or Verizon to acquire capability for first responders to have priority communications	Louisville Police and Louisville Fire	Chief Dave Hayes and Chief John Willson	In-progress	TBD

Type 1 Incident Management Team

Significant Events:

- The term “unprecedented” has been overused in our culture. That said, this was truly an unprecedented situation. Long term drought resulted in historically low fuel moistures. Consider the time of year—December 30—with unusually warm daytime temperatures. And winds of up to 100 mph which carried the ignition quickly from a grass fire to a conflagration in which homes were the primary fuel and fire spread was from home to home. All attempts to halt the spread of this fire under those conditions were doomed to fail. Spread of this fire slowed and then halted only when winds subsided, and temperatures dropped prior to snowfall on December 31.
- Initial response to this incident included many mutual aid resources as well as other fire-fighting resources from various local jurisdictions.
- Some of the major hazards were numerous completely burned or partially burned single family and commercial buildings that included compromised powerlines, gas and water lines, congested road systems, sub-zero temperatures, and infectious disease.
- During an extraordinary initial attack effort, a significant amount of first responder equipment and supplies was damaged on the Marshall Fire. Many claims were settled locally, but larger claims for equipment will need to be settled by DFPC.
- On January 2, FEMA Administrator Deanne Criswell, US Representative Joe Neguse, US Representative Jason Crow, Senator Michael Bennet, the Governor of Colorado, and members of the Colorado cabinet viewed the damage caused by the Marshall Fire and response efforts to date. They met with incident management personnel, Boulder County staff, and members of the public.
- President Biden and First Lady Dr. Jill Biden traveled to the area on January 7 to view the damage caused by the Marshall Fire and response efforts to date.
- The Marshall Fire received national attention. The daily press conference held by the EOC, and Boulder County Sheriff answered many questions from the media and the public. IMT1 PIOs handled media requests from local, regional, and national outlets to assist the EOC/call center with workload.
- Liaisons facilitated a meeting between Xcel Energy, City of Superior, Louisville and Boulder County on January 1 to establish priorities for restoration of electric and gas services. Prior to the IMT1 arrival, coordination between parties was disjointed. Xcel located 2 key staff at EOC and Incident Command Post (ICP). This placement of Xcel Energy staff was instrumental in successful communication and coordination between municipalities. Xcel was able to complete gas recharging and electrification on the entire effected area by January 4, 2022.
- Cooperator meetings were conducted in conjunction with daily EOC calls with agency administrators and local stakeholders. Two key utility cooperators were added to the daily updates which efficiently and effectively allowed the team to share information and identify new issues.

Notable Successes:

- Early understanding that our typical standard metrics of success (e.g., percent contained) were not sufficient for this incident. The IMT1 developed an “all hazards” strategic operations plan which captured the needs of the Delegation of Authority and established several metrics by which to measure success. These included such activities as restoring gas and electricity, hazardous materials assessment, thermal imaging, etc.
- The incident and ICP were located one hour away from the Rocky Mountain Fire Cache which allowed for quick deliveries.
- Boulder County reacted quickly in ordering Team Rubicon to act as force multiplier in the Logistics Section. Team Rubicon performed as camp crew, drivers with vehicles, and filled other critical gaps.
- Caches of radio and radio accessories were quickly loaned to the IMT1 by the Boulder County Sheriff’s Office, City of Boulder, Jefferson County Sheriff and SEOC.
- FirstNet arrived on scene quickly to enhance coverage and provide PTT phones and hotspots.
- The Avista Hospital worked with the IMT1 to install a portable repeater on their rooftop which ensured adequate radio coverage on the incident.
- The Communications Unit was setup in the Boulder County Sheriff’s Office Mobile Communication Post and the City of Boulder’s Police Communication Van equipped with radios, self-sufficient power system and a quiet work environment. The command truck enabled quick activation of the Communication Unit, a critical need for firefighter and first responder safety.
- The Fraternal Order of Police provided first responders breakfast, lunch, and dinner for many operational shifts with donated personnel, equipment, and food.
- Staffing an Infectious Disease Specialist to focus on COVID mitigations and compliance was appreciated by all responders. The availability of rapid test kits helps to ensure personnel testing was available.
- Boulder County EOC was in place when IMT1 received command of the incident. Information was maintained by the County with IMT1 working to support and share information through EOC. Twice daily calls and having a PIO Liaison in EOC helped facilitate information sharing.
- Messaging was drafted by PIOs after meeting face-to-face with law enforcement, incident operations managers, and structure assessment personnel. This allowed the messages to be created in a timely and efficient manner as well as being responsive to emerging events.
- The IMT1 staffed one COVID advisor who was supported by one assistant. Personal COVID tests were made available to all incident personnel. Positive tests were identified with both direct and indirect support personnel.

Challenges and Resolutions:

Challenge: All hazard incident within an urban setting managed with wildland resources. For example, having the proper resources to deal with “HazMat” calls. Most wildland resources are unfamiliar with what constitutes an actual “HazMat” situation and what does not.

- Resolution: Utilization of the right resources to complete the mission safely was key. Emphasized, during daily safety briefings, the importance of having properly trained and equipped resources before engaging in operations. Colorado Surge Engines and Boulder County Hazardous Materials Consortium were key resources in this regard.

Challenge: 800 MHz radios, during the beginning of the incident. Not all resources were familiar with the radios or the system, this made it difficult to convey information with resources and dispatch 911 calls.

- Resolution: Utilized group texts to ensure information was received.

Challenge: Tracking and filing financial paperwork for overhead and equipment without resource orders is always challenging. Lack of information led to more estimating (instead of actuals) for cost calculations of initial attack and mutual aid resources.

- Resolution: Division of Fire Prevention and Control (DFPC) assisted Finance with locating and developing resource orders (where appropriate) to create a relatively accurate record of responding resources. Where paperwork exists, complete financial records were created and sent home with resources.

Challenge: Initial tracking of approximately 300 resources, 150 of which were engines. These resources largely consisted of surge and mutual aid resources.

- Resolution: Ordered a virtual Resource Unit Leader (RESL) who was able to reconcile and enter the data on an Excel spreadsheet collected by the Type 3 team. The resources that stayed on the incident were given 5000 and 6000 numbers in e-ISuite and displayed on the 204s to help separate them from other resources and assist in financial tracking.

Challenge: It was a holiday weekend, so we were unable to get the copier/scanner we ordered for a couple days after we arrived.

- Resolution: The jail was able to support us with printing the required number of Incident Action Plans (IAPs) until a rental copier was delivered to ICP.

Challenge: The winter storm prevented travel of some IMT1 members and delayed travel of others.

- Resolution: We were able to bring in some local people from other IMTs to assist us in management of the incident.

Challenge: An experienced federal incident Buying Team was not ordered with the IMT1.

- **Resolution:** The Boulder County EOC acted as the Buying Team and provided the IMT1 with a process to order local purchase items.

Challenge: Approval of releases related to resident re-entry was challenging due to the number of reviewers at the EOC in addition to PIOs from City of Louisville and the Town of Superior. Initial releases were going out several hours after re-entry occurred delaying public notification.

- **Resolution:** IMT1 PIO requested one point of contact as “primary reviewer” for each entity. The primary reviewers were sent the release and could review and get input from others, if necessary, but it streamlined who was to respond as final reviewer. Streamlining the review process facilitated more timely information sharing.

Challenge: PIO Roles at EOC changed daily and IMT1 PIOs never knew who was in charge each day as the reviewer or primary contact. Roles were not clearly defined and transparent.

- **Resolution:** PIO Liaison to EOC talked to EOC staff and made recommendations for ways to streamline coordinated tasks and lend stability to the information operation despite changes that happened out of necessity. After that, roles stayed static as much as possible which helped process.

Challenge: Infectious disease protocols and measures in a traditional ICP setting.

- **Resolution:** Emphasized infectious disease risk mitigations such as mask use, social distancing, and good hygiene. Improved configuration of ICP and food lines, virtual options for briefing, and increased field briefings limited the number of personnel that congregated at ICP. The assigned COVID advisor acquired sufficient COVID test kits to make them available to all resources. Sanitizing wipes and hand sanitizer were available at individual workspaces

Boulder EOC AAR for Marshall Fire

The Boulder Emergency Operations Center (EOC) is the coordination, support and disaster management center for the City of Boulder and Boulder County. When a large-scale emergency or disaster occurs, the center is activated by the Director of the Office Disaster Management. The activation of the EOC takes time to bring all systems online once the initial request to activate the EOC goes out. The Office of Disaster Management Staff must arrive at the EOC within 1 hour of notification, launch notifications to emergency support functions, and start to gather information for briefings. A core or full activation occurs within the next 2-3 hours. The EOC is operational sometime during the next 2-3 hours but full integration with incident command usually takes an additional 1-2 hours. EOC activity is high during this period of the response as the need for sheltering, transportation, public messaging, developing situational awareness, setting up a call center and resource ordering are needed in all disasters.

The Incident commander manages the operations associated with crisis management particularly life safety, stabilizing the incident and property / environmental preservation. The EOC supports the established incident commands, coordinates with jurisdictional authorities, and handles all the consequence management needs through the emergency support functions that make up the Boulder Multi-Agency Coordination System (MACs).

The Multi-Agency System delivers capabilities needed to manage a disaster and is comprised of resources from Boulder County, the City of Boulder and other municipalities, non-profit organizations, Volunteer Organizations Active in Disasters (VOADS) and private sector organizations.

The EOC will stay activated through the response phase of the disaster and once the incident commands demobilize the EOC manages the transition into a recovery structure.

Emergency Support Functions (ESFs) activated during the Marshall Fire response.

EOC Director	Support agency administrators, coordination of jurisdictional authorities, EOC manager back up and Interface with Incident Management Teams
EOC Manager	Manages all systems, functions, and resolves problems associated with the operation of the EOC.
Situational Awareness Section	Develops and maintains situational awareness, conducts briefings and interfaces with IMT Planning
ESF 1- Transportation	Evacuation support
ESF 2- Communications and BCARES	Shelter communications and cellular system status.

ESF 3- Public Works	Infrastructure impact response
ESF 5- EOC	Operate the EOC DMS
ESF 6- Mass Care	Shelter and human needs
ESF 7- Resource Management	Order response resources, feeding, support equipment and personnel.
ESF 8- Public Health	Coordinate medical facility needs and access functional needs at evacuation sites and in shelters
ESF 11- Natural Resources	Address Parks and Open Space issues.
ESF 12- Energy	Coordinate power and gas response
ESF 13- Public Safety	Establish connection and coordinate with incident commands
ESF 14- Impact Assessment	Estimate impacts to the community and develop reports.
ESF 15- PIO	Message the community support alert and warning messaging and press requests.
ESF 18- Education and Schools	Coordinate school operations and provide bus resources for evacuation.
ESF 19-Volunteer and Donations Management Resource Management	Coordinate spontaneous volunteers and VOAD groups along with public donation processes.
ESF 21- Animal Management	Manage all animal evacuation needs.
ESF 23- Community Engagement	Monitor community needs and assist with establishing community meetings.
ESF 25- Meteorology	Work with the NWS to provide current forecasts and threat assessments.
ESF 26- GIS	Provide all GIS needs for the disaster response.
Call Center	Operates a call center the community to access instead of 911 centers for information.

EOC Highlights & Timeline First 12 hours

1132: First posting by ODM Staff of Middle Fork Fire and evacuations being ordered. Boulder IMT Notifications sent.

1139: The EOC activation notification sent ODM Staff in the EOC working.

1201: South Boulder Rec Center is evacuation point.

1210: ESF 6 Mass care advises Evacuation Point is Longmont Senior Center for Middle Fork Fire.

- 1230: Moving IMT to Flatirons Crossing and working on land use agreement.
- 1246: First EOC Briefing conducted indicating core emergency support functions are active.
- 1321: ESF 8- Public Health advises Avista is evacuating due to smoke.
- 1343: YMCA is new evacuation site in Lafayette
- 1345: EOC Briefing #2 Conducted
- 1352: ESF 1 Transportation deploying resources to Avista to assist with evacuations.
Supporting evacuations from residences and facilities.
- 1356: Call center is activated
- 1513: EOC Briefing #3
- 1516: South Boulder Rec is closing, and North Boulder Rec is new evacuation site.
- 1600: EOC Briefing #4
- 1657: YMCA in Lafayette, North Boulder Rec, Fairgrounds open for animals and COVID Patients can go to the CRC shelter.
- 1717: ESF 1- Transportation is starting to increase activity from moving people from private residences and continuing to assist with long term care facility evacuations. This continues for the next 2 -3 hours.
- 1800: EOC Briefing
- 1852: Rocky Mountain Christian Church opened in Niwot as a Shelter by the Red Cross
- 1936: Boulder Fairgrounds at capacity coordinating with Larimer and Jefferson County to open fairgrounds to handle animals.
- 1945: EOC Briefing #5
- 2130: EOC Briefing #6
- 2154: ESF 1 Transportation holding drivers on standby for evacuations if needed overnight.
- 2200: Middle Fork Fire turned over to Lefthand Fire from the Boulder IMT Incident Commander.
- 2245: EOC Briefing #7
- 0130: EOC placed in a tactical pause until 0600 the next day.
- EOC activation period: December 30, 2022, to January 17, 2022

Over What went well themes:

- Remote/hybrid EOC worked well due to the amount of practice with it since 2020. Remote briefings and WebEOC were mentioned frequently as effective coordination tools.
- Integration with partners, especially the state, neighboring counties who assisted through mutual aid, and utility companies.
- Despite prolonged incident fatigue, many people mentioned that they felt supported, that people showed up when they needed to, and helped with the overwhelming needs of this incident.
- System of the EOC worked well; remote briefings worked well.
- Sheltering: standing up 3 shelters on first day to deal with unknown capacity
- EOC resource ordering available and ready staffing; people had previous experiences needed to execute the heavy lift ordering resources.
- Structures/relationships in place due to the pandemic and other disasters.

Comments on hybrid and remote coordination tools:

WebEOC

- All respondents found WebEOC very useful or useful with only minor issues.
- In interviews, some sections reported that their systems are not in WebEOC, so they relied on Teams instead (e.g., resource mobilization, donation management).
- People suggested refresher training on WebEOC, especially as not all ESF boards are nested under the same menus, some people need access to multiple ESFs ESF 1 / 3.
- WebEOC does not display as well on phones, so it was difficult to access from the field.

Situation Reports

- Overall, Sit Reps were described as useful and particularly useful if information was missed on a coordination call, or as a later reference after coordination calls.

Zoom Briefings

- Respondents found virtual briefings very useful or useful with only minor issues.
- Interview participants similarly found virtual briefings very helpful.
- Suggestions included:
 - Define attendance expectations for those with limited roles.
 - Remind participants of the CAN structure at the start of each meeting and that ESF leads are sharing information.
 - After the first few day's briefings were too frequent.

Public Information Map

- Respondents said the public information map was very useful or useful with only minor issues.
- In interviews, some ESFs said they did not need to use the map. The most common usage reported was to provide information to the public.

Overview of Work by ESF:

EOC Manager

- Limited space in the EOC was a challenge, along with staff being remote.
- Quickly understood the scope of this disaster and began working to bring in partners and conducted impact assessment based on best estimate.
- MAC Group partners and ESF capabilities responded quickly as many personnel were off duty or on leave.
- Frequent briefings helped to maintain situational awareness of EOC efforts.
- Difficult to obtain situational awareness of the fire's location, evacuations, and operational efforts until late in the afternoon.

Call Center

- Call takers felt supported by managers and remote call center was effective
- Training and call center FAQ page were helpful
- Securing call center licenses created a lag in bringing in new call takers
- Consider staggering the shutdown of the Disaster Assistance Center and Call Center

ESF 1 (Transportation)

- Had good responsiveness from the transit partners and Via to help with approximately 100 evacuations in less than 12 hours
- There was a bit more of a lag to get CU buses or RTD buses--CU was in part due to the winter break, same with school districts
- Decided to pull services out of Boulder so that operators would be ready to assist, this was helpful during initial evacuations
- This unfolded so quickly that transit partners were going down streets with roadblocks, navigating near fire
- Getting information about fire conditions on the ground was difficult due to changing conditions
- Need to make sure that everyone has WebEOC information and is ready to log in

- Staffing was a challenge due to the holiday
- Had experience from Calwood Fire, it was helpful to have that before this more intense event
- Via will do more emergency training for operators, might need a way to support them in dangerous areas or in the face of roadblock, have a debriefing with Via about their perspective

ESF 2A: BCARES

The Marshall Fire resulted in the activation of the BCARES EOC radio communications position including the establishment of communications with ESF-5 Situational Awareness, ESF-6 Mass Care, and ESF-13 Public Safety for the duration of the activation. As the Marshall Fire expanded, evacuation center support was requested for the following evacuation centers: YMCA – Lafayette, North Boulder Recreation Center – Boulder, Rocky Mountain Christian Church – Niwot.

These BCARES operational positions provided on-site situational reports (SIT-REPS). These reports were obtained using the BCARES digital messaging system (*WINLINK*) with remote stations established at each evacuation center. Hourly status reports were submitted on ICS-213 forms to ESF-6 Mass Care in concert with the hourly EOC briefings.

Element # 1: Activation of the BCARES ESF-2A BCARES Position at the Boulder County Emergency Operations Center. (Initial activation)

Element # 2: Activation of the following radio networks within Boulder County: BCARES Radio Network – Primary Net, Mountain Emergency Radio Network (MERN), Allenspark Neighbors Emergency Network (ANEN) and Airlink (Alternate Access Radio Network).

Element # 3: Establishment of BCARES voice and digital messaging communications capabilities at each of the reporting and evacuation centers. Evacuation Centers YMCA – Lafayette, North Boulder Recreation Center – Boulder, Rocky Mountain Christian Church – Niwot.

Element # 4: Activation of the Mountain Emergency Radio Network (MERN) covering mountain communities due to high wind event.

ESF 3 (Public Works)

- People were ready to help, City of Boulder assistance despite lack of impact was helpful.
- Utility restoration went well and proceeded quickly, good collaboration with utility partners.
- Need to develop a stronger connection between resource mob/public works to document mutual aid.
- Need to keep personnel connected in the transition from response transitions to recovery.

- Guidelines on record keeping and notetaking for those new to the EOC would be helpful.

ESF 5 (Situational Awareness)

- Coordination and getting people connected after briefings went well.
- Could do more automation to lessen the load, for example, shift lists could be automatic in WebEOC.
- Need to consider ways to update the Incident Display Board; possibly use a location in WebEOC.
- Did well with scheduling briefings, ESFs did a good job using CAN structure
- Give people publishing the sitrep a break from other duties to focus on creating that at the end of the day.
- Remind people of CAN structure (perhaps in MACS meeting ahead of time) on briefings and that the leads present out so that others from each section know their role is to listen.
- Establish a workflow for SAS staff so that they know which information to gather at various points throughout the day as it is updated.
- Establish a common file naming system starting with date.

ESF 7 (Resource Mobilization)

- Remote ordering system continued to work well.
- Uncommon and large orders involving partners (water, heaters) but we adapted quickly.
- Resource mob staff was using personal vehicles to pick up resources, need a different system for this.
- Ability to work remotely was helpful.

ESF 6 (Mass Care/DAC)

- Shelters set up quickly, but bench was depleted for shelter leads. Need more training so that we have more people ready to take leadership roles. Would be good to do more public outreach between events to get volunteer sign-ups that we can use during emergencies.
- Second part of sheltering went well and was adequately staffed.
- Mental health partners at shelters were helpful.
- Shelter partnerships between the facilities, ODM and Red Cross could be ironed out more, especially with new shelter sites.
- We have a standing MOU with Red Cross to get intake information about shelter occupants, but this agreement needs to be reviewed.
- ESF 6 Incident Managers were responsive and helpful. Incident Manager and Liaison should both be in EOC in person during the intense part of the incident.

- The DAC leads should assign people to specific roles/responsibilities and make connections to the EOC. The policy team was making management decisions and staffing roles instead of making policy-level decisions. Should have streamlined ordering through the EOC.
- Need to update DAC training materials and “DAC in a box” with relevant supplies.

ESF 8 (Public Health)

- Hospital evacuation was successful despite rapidly unfolding situation.
- Partnerships with long term care facilities were strong due to pandemic.
- ESF 6/8 connection could be strengthened, especially about planning, when preoccupied with evacuations could have moved ESF 8 liaison role to the EOC.
- Clarifying the abilities of the EOC with the hospitals so hospitals understand that they should coordinate with the IMT initially.
- The EOC truck will be helpful to move available supplies to shelters quickly
- Should have anticipated that mental health support would have been needed at shelters.
- A deeper bench was needed.

ESF 13 (Public Safety)

- See the Fire and Law AAR.

ESF 14 (Damage Assessment)

- Damage assessment occurred quickly and worked well with law enforcement liaisons.
- Crisis Track software support was key--work to establish contract for this ahead of incidents.
 - Team Rubicon assisted with wind damage assessment for mobile home communities.
 - City of Boulder helped support other jurisdictions.

ESF 15 (PIOs)

- Emergency Services PIOs of Colorado were able to help with staffing during the incident, very helpful.
- Translation team worked well with PIOs getting Spanish translation messaging out almost simultaneously.
- Utilizing Teams worked well to keep PIOs integrated once the snags of involving outside agency personnel.
- Significant amount of messaging pushed out on social media and blog for the entirety of the incident went well.
- 5 different media briefings with American Sign Language services.

- Need to rebuild PIO bench so that PIOs can fulfill needs and rotate in/out.
- Mutual aid helped greatly with filling PIO spots, having the relationships to get help.
- Consider a designated media liaison specially to answer local media questions.
- Need to capture questions and answers from the live briefings and post them.
- Would be helpful to create public awareness about ODM in between events so that public/media knows what ODM does.
- It took time to get PIOs access to the various platforms, passwords created issues when bringing in non-city/county staff.

ESF 19 (Volunteer/Donations)

- Donation button on the OEM website worked well once set up and exported into Excel, entering donations manually was time-consuming. Overwhelmed by spontaneous donations, this improved once we identified what donations would be most helpful.
- Available donations list could have been more organized to check for resources.
- Community pick up point (for water, heaters) should be separate from shelters, ESF 6 ended up dealing with donations.
- Consider if accepting used items would be beneficial (more ecofriendly).
- Requested state activate their MOU with the Adventist Church, they stood up a donation center quickly.
- Need to create a planning document and circulate in the morning so that everyone is on the same page.

ESF 21 (Animal Control)

During a disaster the Emergency Support Function (ESF) 21 Animal Management is notified to respond. The actual Sheriff Animal Management Officers operate under the incident command structure developed. All animal shelters are managed under the EOC management structure until the need is resolved usually once residents are allowed back into evacuated areas or other arrangements are in place. The resources of ESF 21- Animal Management are from the Sheriff's Animal Management Team, City of Boulder Animal Management, NCR Animal Management Committee, Boulder and Longmont Humane Society, and Boulder County Fairgrounds Staff.

During the Marshall Fire ESF 21 Animal Management evacuated hundreds of animals domestic and large agriculture animals. They also coordinate animal reunification processes for evacuees who are separated from their animals. Lastly, ESF 21 animal management also manages the decedent animals found as result of the disaster.

Response Overview

- Animal Control Officers were activated immediately and requested our volunteer Sheriff's Office animal evacuation team. Additional resources called included neighboring Animal Control teams and national partners that are locally based.
- Animal sheltering partners were notified immediately: Humane Society of Boulder Valley, Longmont Humane Society, Boulder County Fairgrounds. Within hours notified neighboring partners: Jefferson County Fairgrounds and Animal Control and Larimer the Ranch Fairgrounds. The State Veterinarian made contact within that first operational period to extend support.
- Boulder Office of Disaster Management decided to publish a Survey 123 questionnaire on social media to request animal evacuations. This relieved call load on dispatch and call center.
 - Received 183 requests through the survey and became multi-jurisdictional quickly.
 - When we ended it on day 3, we transitioned to a link for reporting lost pets on the Humane Society website.
 - It was difficult to manage the public, there was a Facebook page called "Boulder County Fire Lost & Found Pets", but it was not managed by any official partners. Many members of the public also drove to the fire area to attempt to rescue animals. Rescued animals were taken to shelters outside of local jurisdictions, which made it difficult to pay for services and locate owners.
 - It was difficult to track numbers of animals evacuated and deceased.
 - Need animal preparedness throughout our communities and not just in mountain areas that expect wildfires.

Day 2 Response Planning

North Central Region All Hazards Planning Area (NCR) Animal Emergency Committee convened on day two. Efforts continued daily over the next week. The leader of North Central Region All Hazards Planning Area (NCR)- Animal Evacuation Committee took amazing notes and distributed a spreadsheet daily for notes and resources. The planning group added additional partners to meetings from neighboring agencies that are not part of the NCR. State ESF 6 Mass Care & ESF 11 Natural Resources & Agriculture were represented at this meeting and at the other mass care meetings, donations, and volunteer management meetings to make sure animals were included in the planning processes.

During the planning meetings planning occurred to address sheltering needs for companion animals and livestock and other agricultural issues: feed/backyard animals (cows, chickens, and bees), hay/feed options, carcass disposal (planned for large-scale mortalities), and soil issues. Coordinated with a local partner agency, Colorado Horse Rescue, to manage a hay bank for

affected livestock owners. They also had limited financial support to rebuild fences and shelters.

Discussed options for animal rendering and small animal cremation. Local Humane Societies offered free cremation to families if deceased pets were found on properties.

CSU Extension modified an existing guidebook for community members about what to do after a disaster that included several pages about animals.

ESF 21 arranged for staff at the Disaster Assistance Center animal table with volunteers/staff and provide pet food.

ESF 22 (Cultural Resources)

- The planned activities went as expected and included comparing perimeter map with known or potential historic resources, talking to community members about the resources in their areas.
- Remote work was successful.
- There were few people available to staff the position and a need to play a role with ESF 14.

ESF 23 (Community Engagement)

- Translation services and sign language services went well.
- Could use more time before public briefings for translators to see content of those briefings.
- Town Hall came together quickly.

ESF 25 (Meteorology)

- There were strong relationships in place already.
- NWS could have provided a spot fire forecast if asked.
- Need to prepare for fires on high wind days whether we meet red flag parameters or not.
- Anticipated a request to active EAS.
- Could use single office WebEOC login, if allowed.

ESF 26 (GIS)

- Many folks stepped up to volunteer for shifts.
- The GroupMe callout for staffing was not received by many people so there were not many volunteers to staff initially.

- Need more training so that GIS staff feel more comfortable volunteering to take shifts.
- There was some lack of clarity on the purpose of the public information map and what to include and leave out. GIS should predetermine what will be included and excluded.
- Teams caused some issues when switching between city and county channels.
- Communication around road closures is still poor. Need to determine a standard for displaying road closures ahead of time.
- Need others to have editing capability for SAS map.

AAR Improvement Plan EOC

Capability	Observation	Corrective Action Recommendations	Primary Responsible Agency	Agency POC	Start Date	Comp. Date
EOC Staffing	<p>Many ESFs mentioned the state of turnover of government employees and that institutional knowledge had been lost in recent years.</p> <p>Many ESFs stated a need to build a deeper bench of staff so that ESFs could rotate in and out and rest.</p>	<p>Perform recruiting program and provided on-boarding training and exercises.</p> <p>ODM staffing levels: 2 people not being here right away slowed down setup time, need more staff and staffing</p> <p>PIO capability depleted due to personnel changes (ESF 15); didn't do media inquiries because of this</p>	Office of Disaster Management	<p>Mike Chard mchard@boulderco.unity.org 303-565-7878</p>	In progress	<p>Recruitment program completed in 2022.</p> <p>Start training programs in late summer or early fall 2022</p>
Public Information	<p>Issues related back to public communication, include alert/warning messaging and communicating with local media.</p>	<p>Need to develop automated or enhanced messaging on website and social media to support alerts while EOC is activating.</p>	Office of Disaster Management	<p>Mike Chard mchard@boulderco.unity.org 303-565-7878</p>	In progress	May 2022

		Need to examine ESF 15 and field PIO interface, also more PIO for media inquiries during EOC activation.				
Multi Agency Coordination	This incident impacted unincorporated parts of Boulder County, so there was some negotiation of how to help the various impacted areas and how to coordinate across partners with Superior and Louisville.	Needed to hold a MACS Agency Administrator meeting to develop pre disaster agreements on how to interface communities form response into recovery.	Office of Disaster Management	Mike Chard & agency administrators mchard@boulderco.unity.org 303-565-7878	July 2022	August 2022
EOC Operations	The variety of technologies available to check-in led to some platform fatigue.	Need to deploy new WebEOC system -More training on Crisis Track for DA before event	Office of Disaster Management	Mike Chard mchard@boulderco.unity.org 303-565-7878	In progress	2022-2023
EOC Operations	Being remote reduces situational awareness Need clearer liaisons/plans with some other ESFs More staffing/longer	Further define the liaison problem and develop solutions. Work on ESF recruitment	Office of Disaster Management	Mike Chard mchard@boulderco.unity.org 303-565-7878	June 2022	Dec 2022

	term staffing					
Public Information	The most common issues reported were that the maps caused issues for homeowners trying to submit insurance claims, and the map of utility outages was not up to date, so people stayed in shelters for longer than necessary waiting to confirm their utilities had been restored.	<p>Suggestions included:</p> <p>Make the map easier to find on the website with a single click.</p> <p>The map should not stop at our county line when incidents are multijurisdictional.</p>	Office of Disaster Management ESF 15 GIS	Mike Chard mchard@boulderco.unity.org 303-565-7878	June 2022	TBD

AAR Improvement Plan ESF 21 Animal Management

Capability	Observation	Corrective Action Recommendations	Capability Element	Primary Responsible Agency	Agency POC	Start Date	Comp. Date
EOC Staffing	No lead in the EOC due to short staffing from partner agencies and no trained volunteers.	Develop staffing for EOC / ESF 21 Position	EOC Operations	BCSO and COB	BCSO-Sara Spensieri 303-859-0408 COB-Jennie Whittle 720-447-6023	3/1/22	August 2022
Training for ESF 13	ESF 13 Law enforcement had a representative	Develop ESF 13 Public Safety Training	EOC Operations	BCSO and COB	BCSO-Sara Spensieri 303-859-0408	June 2022	July 2022

	who was helpful but not entirely trained.	program for ESF 21 support.					
GIS Support for Survey 123	Still working with GIS to work out the kinks in the <u>mapping</u> process with Survey 123. This caused frustration.	Get with County GIS staff to work through work processes.	EOC Operations	BCSO County GIS	BCSO-Sara Spensieri 303-859-0408 GIS Molly Watson	1/24/22	2/28/22
GIS Support for Survey 123	Still working with GIS to work out the kinks in the assignment process with Survey 123. This caused lots of frustration to first responders.	Get with City and County GIS staff to work through work processes and notification requirements.	EOC Operations	BCSO County GIS City GIS	BCSO-Sara Spensieri 303-859-0408 GIS Molly Watson	1/24/22 County IT	In Progress
ESF Coordination	ESF 21 had no direct contact with ESF 6.	ESF 21 needs to develop connection / integration process for regional and state resources with ESF 6 Mass Care.	Operational Response	BCSO and COB	BCSO-Sara Spensieri 303-859-0408	June 2022	July 2022
Agriculture Assessment	Not sure how to do a quick agriculture damage assessment, nor how to reach ag partners with specific	Develop an impact assessment process for agricultural affected businesses, farms, or animal populations.	Impact Assessments	BCSO and CO Dept of Ag	BCSO-Sara Spensieri 303-859-0408 Dept of Ag-Dr. Maggie	TBD	TBD

	resources (FSA, USDA, Farmers.gov)				Baldwin 720-668-2050		
Disaster Assistance Center capability	Need a DAC go kit and to have a better staffing plan for an animal table.	Develop a go kit standard also identify staffing.	Mass Care	BCSO and HSBV	BCSO-Sara Spensieri 303-859-0408 HSBV-Jan McHugh-Smith 719-330-1402	TBD	TBD
Preparedness and COOP	Recognized a shortfall in PACFA for animal facilities, they need an official emergency plan for all animal daycare/boarding places and animal hospitals.	Develop a COOP standard plan for animal facilities to use along with emergency plans	Preparedness	PACFA Dept of Ag	Program Section Chief: Nick Fisher 303-869-9146 And HSBV-Jan McHugh-Smith 719-330-1402	2/1/22 Jan HSBV	In Progress

AAR Improvement Plan BCARES

Capability	Observation	Corrective Action Recommendations	Primary Responsible Agency	Agency POC	Start Date	Comp. Date
Activation of BCARES Net	Activated at 1500 hours with adequate staffing for the first operational period.	None currently	BCARES	Emergency Coordinator & Chairman abishop1150@comcast.net (303) 437-7835 mobile	TBD	
Activation of ESF-2A Position	Allowed BCARES to get ahead of the mission growth curve early on.	None currently.	BCARES	Emergency Coordinator & Chairman abishop1150@comcast.net (303) 437-7835 mobile	TBD	
Establishment of ESF reporting	Using ICS Form 213, hourly reports were provided to ESF-6 as evacuation center populations Continued to grow.	Refresher training on use of ICS forms.	BCARES	Emergency Coordinator & Chairman abishop1150@comcast.net (303) 437-7835 mobile	TBD	

	<p>The 213 forms were not filled out correctly. Date and time stamps were not filled in, resulting in the lack of ability to chronologically list the 213s as they were sub-mitted.</p>					
<p>Situational Status reports</p>	<p>The MERN networks were activated without delay due to the presence of BCARES members already in place at the mountain residences.</p> <p>The amount of voice traffic at times tended to overwhelm the primary BCARES net.</p>	<p>Additional staffing will have to be committed to early on so that a "Resource Net" can be established as radio traffic increases</p>	<p>BCARES</p>	<p>Emergency Coordinator & Chairman</p> <p>abishop1150@comcast.net</p> <p>(303) 437-7835 mobile</p>	<p>TBD</p>	
<p>Stand Down of Field Locations</p>	<p>As evacuation sites were closed BCARES members who were providing radio links to the EOC stood down their operations on a timely</p>	<p>None currently.</p>	<p>BCARES</p>	<p>Emergency Coordinator & Chairman</p> <p>abishop1150@comcast.net</p>	<p>TBD</p>	

	basis and returned to their homes.			(303) 437-7835 mobile		
Staffing	<p>9 out of approximately 60 members deployed with 0 additional available for expanded operational periods. Additional staffing had to be requested from other regional / section ECs.</p> <p>A continuing issue of poor response has jeopardized the capabilities of BCARES. This lack of commitment by members compromises our MOU agreement.</p>	The actual number of volunteers will continue to be reduced making staffing a challenge if the COVID-19 pandemic continues. To offset this situation, it will be necessary to continue to rely on outside resources within the ARES framework.	BCARES	<p>Emergency Coordinator & Chairman</p> <p>abishop1150@comcast.net</p> <p>(303) 437-7835 mobile</p>	TBD	
Operations Period Support	Due to the EOC's initial operational period of 24 hours, the demand on BCARES staffing was met with the initial Everbridge activation.	The re-invigorated membership is needed to ensure members understand the importance and commitment of emergency communications providers.	BCARES	<p>Emergency Coordinator & Chairman</p> <p>abishop1150@comcast.net</p> <p>(303) 437-7835 mobile</p>	TBD	

	Once the EOC's operational period continued for a second 24-hour operational period, BCARES was not capable of staffing assigned tasks with its own members.					
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Recommendations for Building Capacity and Improvements in the Future

The After-Action Improvement Plan matrix provides the outline for each operational or functional area to develop improvement planning areas of effort. To effectively build capacity, improvement goals and objectives need to be supported at the policy level to foster the necessary strategy development and resource support to effect meaningful change. As in all capacity building, the goal is not only to improve in areas of need but to also ensure that best practices and reliable capabilities are sustained into the future.

Conclusion

The Marshall Fire is the most destructive fire the history of the State of Colorado. The weather conditions added complexity to this incident and challenged the entire first response and disaster management capabilities of the county, metropolitan region and state.

Throughout the incident the support from all municipalities across the county during response and recovery helped to keep capabilities engaged and provide services to the community.

The previous two years of disaster experience has provided real-world experience and a constant test of systems. It also has caused fatigue in the personnel performing disaster response and interrupted the ability to make expeditious improvements to address gaps or implement new programs. Despite this fatigue the responders and members of the Boulder Multi Agency Coordination Group always answer the call and find a way to get the job done. The value of debriefing performance and improving has always been present whether informal or formal post incident.

[After Action Report Methodology](#)

This AAR is only a comprehensive review of and report of the operational functions that participated in the process. It is in no way representative of an overall AAR for the entire incident for all organizations, local governments and first response agencies that provided direct assistance, support, or coordination.

The goal of the After-Action Report is to identify the important gaps that can improve the response systems and service to residents and communities of Boulder County.