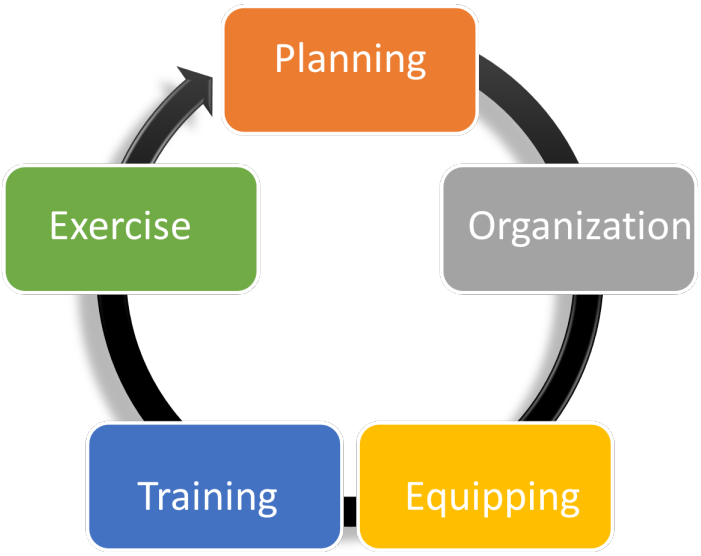
2019 NCR/UASI Rolling Summary Report

POETE:

Used to determine the type of resolution methodologies. P=Planning O=Organizational Change Eq=Equipment T=Training E=Exercise



Report includes findings from the following exercises:
(Please reference the appropriate AAR for more information)

2009	**Vigilant Front Range FSE (VFR)**
2010-11	**Operation Mountain Guardian Series/FSE (OMG)**
2012	**Lower North Fork Commission AAR (LNF)**
2012-13	**Operation Vortex Tornado Series/FSE (Vortex)**
2012	**Englewood Active Shooter FSE – (Englewood AS)**
2013	**Boulder County Flood AAR (Boulder Flood)**
2014	**Operation Mountain SYNC Drills (OMS)**
2014	**Broken Arrow FSE (Broken Arrow)**
2014	**Aurora Theater AAR (Aurora Theater)**
2014	**Tri-County ESF 8 and EMS TTX (Tri-County TTX)**
2015	**Operation Buffalo Shield Active Shooter FSE (OBS)**
2015	**Operation Fall Storm Active Shooter FSE (OFS)**
2015	**Adams County Operation CHAOS FE (CHAOS)**
2015-16	**Regional Wildland Fire Series/FSE (WFE)**
2016	**Regional Mass Fatality TTX (MF)**
2016	**Operation Golden Ladder Drills (OGL)**
2016	**Regional Cyber Security TTX (CS)**
2017	**Regional Decontamination Drills (RDDs)**
2017	**Denver Active Threat Preparedness TTX (DAT)**
2017	**Denver BioWatch (IP completed/bio series 2021)**
2017	**Regional Breaching/Hostage Rescue Drills (Breach)**
2017	**Regional Active Shooter TTXs (AS TTXs)**
2017-2018	**Regional Cyber Attack Series (CAS)**
2018	**Regional Disaster Assistance Workshop (DAW)**
2019	**Cybersecurity Functional Exercise (CFE)**
2019	**Bomb Cyclone AAR (BC)**
2019	**Morgue Surge Operations TTX (MSO)**

A. OPERATIONAL COMMUNICATIONS

1. (OMG) **Radio users are still using 10-codes** to communicate and should adhere to plain talk instead of using 10-codes when using tactical radios. Use of plain language is even more important in multi-agency and multi-jurisdictional events. In addition, the use of plain language will contribute to the development of a common operating picture for dispatch centers and emergency operation centers who are working to effectively resource the response effort. T/E

2. (Vortex/VFR/OMG/OMS/Aurora Theater AAR/AS TTX) **Regional Tactical Interoperable Communications Plan (TICP) was not well followed or known.** Incident personnel did not adequately address radio channel assignments in the ICS 205, nor did they adequately discuss the communications plan during the shift change briefing. Operating in a vacuum, field personnel self-assigned radio frequencies, which then had to be changed when formal channel assignments were disseminated.
   Aurora Theater AAR- volume of radio traffic hindered messaging (not received or not understood) T/E
   (AS TTX) Very few participants knew of or use the TICP/FOG.

3. (Vortex/VFR/CHAOS) **It is important to establish communications with emergency operations center multi-agency coordinating center (EOC/MACC), dispatch center, and responding units.** Pre-disaster/ emergency contact lists and communications plans should be coordinated and agreed upon by regions and jurisdictions in advance and exercised regularly. Establish a Communications Unit in the Logistics Section. Direct this unit to prepare an Incident Radio Communications Plan (FEMA-ICS Form 205) in the initial phase of an emergency response. Ensure that this plan provides specific incident radio frequency assignments for the duration of the emergency, identifies all assigned radio frequencies, and delineates communications assignments for the operation elements identified on the Incident Organization Chart (FEMA-ICS Form 201/207) and the Incident Organization Assignment List (FEMA-ICS 203). Communications plan was not developed and should consider adding EOCs at the county and municipality level. T/E

4. (Vortex/OGL) **Inadequate number of radios in working condition** within hospitals hindered communications within hospitals. Additionally other critical external nodes in the region need to be able to communicate with the EOCs. In OGL, radios across the NCR were **not all programmed correctly including just in time cache radios**. (Radio maintenance & programming)

5. (OMG) **Interoperable communications capabilities for EMS and Medical support agencies did not function effectively**. Communications, both technical arrangements and information management arrangements, degraded the medical branch operations. Additionally, the only way to communicate with the private ambulance companies on scene was verbal/face to face. Policy and procedures

need to be developed in order to improve the capability for government agencies to communicate with private ambulance companies. P/T/E

6. (OMG) The communications system and trained Communication Unit Leaders are available for Incident Commanders to utilize. **Command must understand the strengths associated with the COML resources** within the Region and become comfortable with utilizing these resources during actual events and responses. T/E

7. (VFR) Radio dispatch was **saturated with more radio traffic than one talk group could manage**. In the future, split operations into multiple talk groups by specific need. Identify a command officer that will monitor the talk group to maintain information flow. Practice this reconfiguration of talk groups to validate if it will work. T/E

8. (VFR) There were **difficulties communicating with helicopters**. The communications suite on the helicopters needs to be fixed and/or upgraded. Eq/T/E

9. (VFR) **Decentralized dispatch plans and procedures need to be better communicated** to partner agencies. Provide training and information on the new plans and procedures to partner response agencies. Continue to train and exercise with dispatch. T/E

10. (VFR) **Radio traffic between military and outside partners does not exist other than telephone**. Research the possibility of a gateway solution in Network First. All agencies need to establish common frequencies and train to these. Possibly purchase radios for the EOC and MEOC that operate at the 800 MHz range. Possibly recruit ARES to assist. (is this resolved???)

11. (OMS/Broken Arrow) **Fire and EMS need a channel of their own to improve response.** Broken Arrow -Strike teams should have pre designated intra-team frequency for communication. (working on EMS green channel) P/T/E

12. (CHAOS) **ARES capabilities not well-known across county responders.** T/E

13. (OGL/OBS) **Responders should ensure information related to "the scene" is relayed on radios continuously** (number of victims, locations specifics, people, shooter(s), noise, smells, teams inside, secure locations, and who is securing each location). This allows outside agencies and incoming resources to be aware of the dynamic situation and status continuously. **Supervisors may want to carry an extra radio** to allow the ICP to hear more than one channel at a time (fire agencies often do this). P/Eq/T/E

14. (BC) **Creation of more pre-event messaging might be helpful.** More specifically, **advanced preparedness information**, messaging regarding response time expectation, inability to tow cars, the fact individuals will be taken to shelters and not home, and perhaps pre-established information about tow-lots

and how to retrieve cars that were stuck, tow-fees if for towing after the fact, etc. Having this information might also help people feel more comfortable about leaving cars. **A clear process for notification of command and emergency operations center activations including information sharing platforms utilized by all partners should be developed and utilized.** Delay in public awareness and messaging. Although news was sharing details, **the message from law enforcement to stay off the roads was not made until later**. In addition, it was not made clear where the Arapahoe County shelters were located. P/O

15. (BC) There were **significant difficulties tracking where rescued individuals were pulled from and where their cars were taken**, which makes it challenging giving them the right information after the storm on how to get their car. P/O/T/E

16. (BC) There is a need for future work with **exercising and discussing considerations of a JIC and messaging coordination regionally**. P/T/E

17. (BC) **ARES resources could have been pre-staged in order to be utilized more quickly and effectively.** Pre-staging would have increased response capability, response time, and would have avoided any response challenges given the storm. P/O

18. (BC) **Communications and Engagement Dept. staff could be easily overwhelmed with volume of calls resulting from the activation of the Call Center** P/O/Eq/T/E

19. (BC) OEM was unable to get reception for the designated OEM incident coordination channels on the portable 700/800 MHz radios within the government center, which **severely limited inter-agency communication capabilities**. O/Eq

B. OPERATIONAL COORDINATION

1. MANAGEMENT/POLICIES/LEADERSHIP:

a. (OMG and Vortex) **Multi-jurisdictional plans, policies and procedures** are not fully developed enough to be evaluated in exercises. The region is actively developing a resource plan for multi-agency coordination and prioritization. These are to be tested in Operation Vortex. Vortex – Plans were not completed either. **Unified coordination system - Multi-jurisdictional plans, policies and procedures are not fully developed** enough to be evaluated in exercises. The region is actively developing a resource plan for multi-agency coordination and prioritization. This is the second exercise series over a span of three years that this has been in the development phase. Recommend a working group to proactively insist this improvement be implemented whether it is at a state or jurisdictional level. **Jurisdictions can mutually benefit in several ways when they choose to participate in multi-jurisdictional planning processes**. This process enables comprehensive approaches to mitigation of hazards that affect multiple

jurisdictions; allows economies to scale by leveraging individual capabilities; sharing costs/resources; avoids duplication of efforts; and encourages external disciplines into the process. Continue to build relationships in regional committees. P/O/T/E

b. (OMG/OGL/OFS) Newer **First Responders lacked confidence** in site management and scene security with these types of atypical threats (**terrorist tactics/active shooter**). Additionally, responders should train and exercise in assessing these types of non-traditional problems in order to develop confidence in management and securing these types of events. T/E

c. (VFR and OMG) Varying agency policies and procedures utilized in tactical response operations exposed potential **force protection gaps**. Regional member agencies should consider the development of common policies and procedures that further force protection operations. Updated policies will assist in filling the identified scene safety and security gaps observed during the exercise. T/E

d. (OMG and OMS) **Additional effort is required to develop agreed upon policies and procedures when incidences are across multiple jurisdictions or mutual aid** resources are utilized. OMS-policies and procedures are more closely related when responding to active shooter situations but still work to be done. P/T/E

e. (OMG) Lack of integration of emergency medical services into the incident command structure resulted in many exercise victims untreated for well past the standard of care. Development of a patient dispersal/force protection policy is a high priority area for the Region to address. **EMS should focus on policies and procedures that allow victims to be rescued/treated within a short time frame**. Planning has been conducted and continue T/E

f. (OGL) There is an immediate need to **improve leadership skills and confidence across middle management within the public safety and first responder community**. The response to an active threat situation vastly improves when a single first responder assumes the leadership role regardless of rank or department size to start coordinating into an IC structure. Response times in getting victims extracted were cut in half when leadership developed a plan and assigned roles to accomplish the plan. (see full report) T/E

g. (AS TTXs) Adoption, training, and usage of multiple regional/sub-regional plans is not completely uniform across the region (progress is being made). Very few participants knew of or use the TICP/FOG, use of GRGs is limited, and SOG's are not adopted throughout the entire region. P/T/E

h. (BC) **Need to give thought to how road closures are done, as they are not typically effective.** Motorists only drive cars to lesser used, lesser cared for roads that are in even worse shape (sometimes guided by online mapping apps). Hard

closures are hard to carry out as well, as dispatching equipment to close roads is often unfeasible. P/O

i. (BC) As towing private vehicles with county vehicles often poses a liability risk, providing some sort of **disclaimer regarding vehicle damage might decrease county post-incident liability**. P/O

j. (BC**) Fueling was a challenge for vehicles from many agencies.** Many of the fueling stations were closed or difficult to get to. It took a bit of time to get a fuel truck out to vehicles. This also caused financial concerns as to who was and wasn't getting fuel paid for by the County. Eq

k. (BC) **Areas without snow fencing created substantial problems** – snow completely blocked roads. Regular plows could not get through the sometimes 8 foot drifts. In areas with snow fencing the pavement was barely covered with snow. P/O/Eq

l. (BC) **Road and Bridge operators were not available to assist in life safety missions.** Staff were following existing procedures to plow priority routes – there is no clause for changing this priority within their existing procedures. P/Eq

m. (BC) Currently, **no written plans or policies exist to share staff among departments**, specifically to augment the Streets Dept. during storm events P/O

n. (BC) **Triggers need to be identified** for the Colorado Air and Space Port on closures. The decision to remain open in spite of closing all other government buildings, and then subsequently deciding to close as well, created confusion. Emails were sent throughout the event to the JCPH Directors and the PHIMT for situational awareness. However, there are no written 'trigger points' or processes in place for different activation levels in the ESF 8 Plan for when this information should be sent. It was discussed in the hot wash that if an increase in resource requests occur, then the increase in requests could potentially be a 'trigger point.' In addition, there are no written 'trigger points' or processes, or templates in place for different activation levels in the ESF 8 Plan for when activation notification should be sent to the NCR-PH. Trigger/decision points for requesting and activating shelter/warming center not consistent across EM agencies. P/O/T/E

o. (BC) **Connections and coordination with utility providers was not strong**. In most cases, EMs relied on public facing websites to gather information. P/O/T/E

p. (BC) There is a need to figure out the problem of people going around **road closures and getting stuck on secondary routes**. Roads became very congested with stranded vehicles making it difficult to maintain snow removal efforts P/O

q. (BC) **Risk Management Documentation**: During the event, a vehicle was crashed. There was no relevant pass on or documentation of the crash. P/O/T/E

2. COMMAND AND CONTROL:

a. (OMG/Vortex/VFR/OMS/Broken Arrow/Aurora Theater/OBS/OFS/Boulder Flood) Basic incident command structures are understood by all: however **establishment of an actual unified command, operations and planning, effort must be a part of future training and exercises.** Agencies require training to truly unify command, operations and planning so that the entire response is aware of the common objectives and all are working toward those goals.
Training on how to organize an operational response in a multi-disciplinary, multi-agency scenario must continue and include the conceptual use of divisions and branches. Expanding our capability to manage these types of emergencies at the command level should be a priority training and exercise objectives.
It is strongly advised that the entities conduct training on ICS, specifically unity of effort, unified command, span of control, operations and planning. Continue to conduct training and exercise unified command in multi-disciplinary environment. Note that in VFR it was suggested that these structures include the military responders as well.
Broken Arrow - Some of the basic ICS positions were utilized but no real organized team.
Boulder Flood-Additional staff training on ICS especially Area Command and principles of ICS.
Aurora Theater - There was a failure of police and fire officials to establish a single unified command within an hour after the shooting. Also led to secondary issues of radio traffic overload, duplication of requests, and no control or prioritization of EMS resources.
OBS-Roles and responsibilities were not always clear in unified command. T/E

b. (Boulder Flood) **No clear incident objectives articulated to branches/line level**. Incident objectives were developed by the IMT and not relayed to line level until a planning section was formalized in the 5th operational period. T/E

c. (CHAOS) **ICS expanded to accommodate UC, containing representatives from many of the participating entities which may have hindered quick decision-making, exceeded span of control and overwhelmed ICP.** Agency "ICs" were engaging in operational level tasks and decisions, and were less accountable to UC responsibilities. T/E

d. (OGL) **Law enforcement tend to have span of control issues** which is exacerbated when reaching across jurisdictional boundaries. For example, one officer may have 10-15 people reporting to him or her instead of assigning someone to be in charge of directing a few in team formation. The potential cause of this could be that law enforcement personnel are reluctant in assigning roles and responsibilities outside their jurisdiction even when the other agency is in their jurisdiction. T/E

e. (MF) There was **not a definite command, control or coordination structure**

that could be articulated or understood during the exercise. P/T/E

f. (MF) Coroner's offices do not understand how to order resources when ESF 8 is activated, DOCs are operational and EOCs are operational. **Confusion due to lack of clear planning between public health and emergency management.** P/T/E

g. (RDDs) Hazmat teams should practice organizing into an **initial effective incident command structure**. At times, it slowed operations and made uneven workload balances among some responders. T/E

h. (CAS) Regional partners have identified **the immediate need for additional incident command system (ICS) training for personnel that would respond to a cyber security incident**. T/E

3. TACTICAL LEVEL:

a. (OMG/VFR/OMS/Aurora Theater AAR) The abilities of responders to conduct **render safe on-site** should be a focus of future training to further build this ability. **There was a lack of balance between life safety priorities of responders and those of victims.** Create **extraction safety teams** so that responders feel safe in extracting victims. P/T/E

b. (OMS) Refine policies, plans and procedures in accordance with many items in the OMS AAR (some are very tactical, but important and some are larger coordination issues.) P/T/E

c. (OMG/VFR/OMS/Englewood AS/ Aurora Theater AAR) OMG-Law enforcement was eager and confident when deploying against opposing forces. Teams of the same discipline did well when integrating with other teams of the same type of discipline. **Difficulty was encountered when cross disciplinary operations and tactics were required.** In VFR this was an issue with fire and law enforcement operations. T/E

d. (OMS/Englewood AS/ Aurora Theater AAR/OBS) There is a **lack of communication between police, fire and command.** There were four areas of concern in which a lack of communication was identified:
-Areas that had already been searched were being re-searched by secondary teams who did not know that the rooms had already been searched. Although conducting multiple searches of the same area is common practice, the fact that prior search teams were not identifying these areas caused confusion. One reason given for this was the fact that officers did not want to mark (and possibly damage) the doors of the school to identify that the rooms had been searched.
-The location of victims was not being communicated between law enforcement and fire/EMS.

-The status of the shooter, upon his capture was not communicated to fire personnel.
-The presence of an IED.
OBS-RTFs searching for victims without using intelligence or communicating intelligence about the scene including locations of IEDs. Teams operated inconsistently (see full report). T/E

e. (OMS/Englewood AS/OGL) There is **inconsistent protection of fire/EMS personnel and lack of policy guidance for incidents' involving the need for teams of EMS/law enforcement**. Policies are needed to guide when EMS should go in, how many, with how many protection personnel, and what treatment needs to be done before moving the patient. Englewood AS specific-Some of the law enforcement officers who were tasked with protecting the fire personnel were switching back and forth between searching and protecting. This issue appears to be related to the different tactics used by the different law enforcement agencies. Some departments assign officers to *either* search detail *or* protection detail. Other departments search and protect simultaneously.
OMS-Different teams (and sometimes same team different discipline) used different terminology, policies, and procedures which caused confusion, resources to be ordered incorrectly, operations to lag, and friendly force encounters. In OGL, only some EMS agencies have personal protective equipment for Response Task Force Operations. T/E

f. (Vortex) **Conduct regional level training on the roles and responsibilities of search and rescue team assignments and responsibilities** in accordance to local standard operating procedures and the National Urban Search and Rescue standards. Design exercises that require timely assessment, identification of mission objectives and application of command and control of USAR assets in challenging and dynamic scenarios. **-**Reach agreement on standards to use and implement. P/T/E

g. (Vortex) **Integrate coroner/medical examiner expertise at all appropriate levels in the Incident Management process**, especially in the initial planning and execution phases of emergency management operations. Any delay in the integration of coroner/medical examiner personnel into emergency management community operations until the discovery of decedents creates potential safety, health and legal issues. When possible, Fatality Management personnel should be on-scene and in charge of fatality documentation and recovery efforts to ensure they can fulfill statutory requirements. Coroners should never be working alone on a site. They should be aware of protocol for reporting live victims, and there should be a coroner representative as part of the Incident Command team. P/T/E

h. (LNF) Emergency notification systems, or reverse-911, are an authorized use of 911 surcharge funds, but local authorities are not required to purchase them. As a result, these systems, which are used to notify residents of emergency situations, **are provided by a number of different vendors, with each system offering**

different features and limitations. When a notification must be sent to an **area spanning multiple jurisdictions different notification systems are not integrated.** In addition, emergency notification systems are limited by the decreasing use of land line technology. While traditional land lines are included automatically, residents must proactively register their cellular phone numbers and addresses with the local government in order to receive emergency notifications by cellular phone. The systems are then only able to use the registered address in determining where an individual is located, rather than their physical location at any moment. P/O

i. (OMS/Englewood AS) Although law enforcement can recognize an IED, there were **no IED plans or SOPs to guide their actions after that point,** which caused response delays and confusion. P/T/E

j. (OMS) **Further planning for Casualty Collection Points, Patient Extraction, and joint operations is needed.** P/T/E

k. (CHAOS) Mass notification system was identified by ICP as means to notify the public of evacuations. **It was not clear who is responsible to craft and deliver the message and who is responsible to follow-up with other messages.** P/T/E

l. (OGL) Law enforcement teams must ensure they **drop officers to secure areas** of the active threat scene. This tactic greatly decreases the time it takes to get EMS to patients for any initial treatment and extraction. P/T/E

m. (OMS/OGL) First Responders need more exercise and training exposure to responding to possible IEDs. T/E

n. (RDDs) EMS personnel should continue training to **quickly triage, plan for transportation, and utilize their mass casualty plans**. T/E

o. (Breach) Breaching drill teams psi should not exceed 4 psi and only one team stayed at or below 4 psi this year. T/E

p. (BC) **Better coordination and situational awareness when SAR resources are demobilized or re-assigned**. P/T/E

4. EMERGENCY OPERATION CENTERS:

a. (Vortex) All reimbursement processed to the Federal and State government is based on the supporting documentation. The **documentation must be able to stand the test of audit**, so it is critical that local agencies and governments develop a pre-disaster/emergency standard operating procedures related to the documentation of disaster costs and the guidelines and procedures to file for reimbursement. P/T

b. (Vortex/MF/CS) **Review Memorandums of Understanding, Mutual Aid Agreements and similar documents on an annual basis** to deconflict and

validate them within the region. Design exercises to specifically validate and practice the procedures, protocols and processes delineated in cross-jurisdictional and regional MOUs and MAAs. CS-**Mutual aid agreements may need to be signed in advance. Local Emergency Management offices have a plan for mobilizing and managing resources. These resources and mutual aid agreements should be added to those plans.** P/T/E

c. (Vortex) **Require all EOC personnel to complete the FEMA online course G775 "EOC Management and Operations".** This course describes the role, design, and functions of Emergency Operations Centers and their relationships as components of a multi-agency coordination system. T

d. (Vortex) **A single resource ordering protocol should be standardized across the region.** This process should be clearly agreed upon, documented, and disseminated, with training and exercises to ensure a consistent working process. If "single point ordering" is the only agreed upon method then the receiving end should be scalable to quickly accommodate increases in call density. P/O/T/E

e. (Vortex) L**ack of knowledge as to the types of supplies available outside of an EOC's** immediate jurisdiction. For example, some EOCs were not aware that Denver Water has significant stores of equipment available in 11 counties and equipment caches. P/T/E

f. (Vortex) **Coordination between jurisdictional EOCs** was, at times, problematic. They are interested in supporting each other but further work is required to institutionalize the processes necessary to provide cross-jurisdictional support. P/T/E

g. (OMG/Vortex/WFE) No established practices defining how to coordinate **resource deployment and prioritization in multiple EOC events. Include Resource mobilization and management process and plans validation** into the next exercise series. This includes the **prioritization of resources** process at a regional and state level**.** P/O/T/E

h. (VFR) EOC Management should have **backfill for EOC personnel** similar to that in place for the first responders. P/T/E

i. (WFE) Better define and outline a **state level process for resource "just in time statusing"** and add this process to **local resource mobilization and management plans.** P/T/E

j. (WFE) Sustain **financial EOC training** across the Region to ensure knowledge, skills and abilities remain in place during emergency situations. T/E

k. (CHAOS) EOC **Logistics Staff require enhanced training and more frequent drills** on county level resource ordering processes and state resource plans. T/E

l. (BC) There were no **Finance personnel** present and OEM staff has limited purchasing authority on purchase cards. (BC) There were no trained Finance personnel available to fulfill a role in the EOC. Final cost tracking was done post incident and was delayed. Cost tracking report by IO was delayed due to regular posting dates. P/O/Eq/T/E

m. (BC) **Long term EOC staffing (past a single operational period) is challenging with existing staff**. P/O/Eq

n. (BC) EOC Representation: The PD was the only City department that had representation in the EOC, which required PD staff to coordinate all PW and PRG staff, and city-wide communications. Social media presence about city services was limited. Over an extended period of time, in this case 36 hours, places the burden on PD staff to address city service needs. Costs that exceed normal business is not being tracked and documented purposefully. P/O/Eq

5. DISPATCH CENTERS:

a. (OGL) **Dispatch should consider adding prompting questions** to law enforcement into SOPs such as: Who is the Incident Commander? Who is the Tactical Supervisor? Do you want to go to an interoperable channel? Do you want a channel designated for the Rescue Team? This will help ensure these critical elements are in place as the responders are in an intense situation and key questions could help them organize better. P/T/E

b. (WFE) **Define clear trigger points in the delegation of resource ordering between dispatch centers and EOCs.** P/T/E

c. (BC) The Sheriff's Office received many calls for assistance (outside of AdCom) and it became a bit overwhelming. Perhaps setting up a call center to take non-emergency calls (such as stuck vehicles with no medical concern) might take the burden off of AdCom and off of the Sheriff's Office. P/Eq

d. (BC) There were a lot of kick back calls from people who were looking to see what the status was on a loved one that they had already previously called on. Tracking would help provide with better information for these call backs. P/T/E

6. SUPPORT TO CIVIL AUTHORITY:

a. (VFR) There are no tactical response assets on Buckley or any plans or protocols for military to integrate with local teams. **Establish protocols that will encourage interoperability with the following**: Communications, Investigations, SWAT Deployment, Bomb Squad Deployment, local police resources, coroner's office, and local fire response. P/T/E

C. SITUATIONAL ASSESSMENT

1. (OMG/Vortex/VFR) Recommend that the region **develop policies and procedures for utilizing EMSystems** to assist in the management of medical surge patients and capacity. There is a need to conduct training and routine short exercises on using this system prior to an emergency. Consider multiple hospitals having a couple very well trained users. P/T/E

2. (Vortex and VFR) There is a need to **conduct training and routine short exercises on EMSystems prior to an emergency**. Consider multiple hospitals having a couple very well trained users. E

3. (Vortex and VFR) **There is an inadequate Emergency Medical Dispatch Capacity** for large disasters. P/O/T/E

4. (Vortex and VFR) **Integrate WebEOC, EMSystem, geographic information system (GIS) and similar information sharing system and processes into creating and maintaining situational awareness** among jurisdictions, regions and agencies. Deconflict overlap and stream line each to determine their existence in emergency response. P/O/T/E

5. (Broken Arrow) WebEOC, as with all electronic resource availability lists, are **only as good as the people who manage the information and process**. This should include process/policies on maintaining current availability status. P/T

6. (Vortex) **Emphasize the importance of gathering, producing and distributing information** to all members of the Incident Command and supporting EOC organizations. Ensure this information is exchanged during briefings and debriefings from one shift to another. P/T/E

D. PUBLIC HEALTH AND MEDICAL

1. HOSPITAL:

a. (Vortex) Hospitals lack the **knowledge and understanding on resources** available outside of their EOC to make appropriate requests. Lack understanding that requests need to be specific. P/T/E

b. (Vortex and VFR) **Triage was confusing between evacuation triage and MCI triage.** Basic triage training should be provided to all hospital staff members. This will help in situations where hospital staff may not have an appropriately qualified person to do triage. Additionally, standard tagging system (START) should be implemented across NCR jurisdictions. Hospitals do utilize START. It is not effective in an evacuation. Need to investigate a triage standard for evacuations.

In VFR it was noted that the transport capability was unclear and not fully explained. Medical staff outlined only the medical response of triage and not the transport component as well. T

c. (DAT) There is no official plan in place for **managing patient allocation and tracking** in an MCI of this magnitude. P/O/T/E

2. PUBLIC HEALTH:

a. (Englewood AS) All **notification and activation communications** with public health should be done through the 24 hour ESF #8 or command center lines. T

b. (Englewood AS) Continued development of **the relationship between behavioral health and victims' advocates** needs to be fostered to ensure more seamless operational response in a law enforcement incident. T/E

E. PUBLIC INFORMATION

1. (Vortex) Establish additional lines of **communications** that can be activated during emergencies to provide **family members and the surrounding community** incident specific information. P/T/E

2. (CAS/Vortex/VFR) **Ensure all media releases are drafted, coordinated and released, when approved, by the JIC.** Direct that all daily briefings and public information releases originate only from the JIC.
   Establish a Joint Information Center/systems during multi-jurisdictional emergencies or whenever emergencies will require wide-dissemination of information, alerts and emergency actions across a region to include nongovernmental and private-sector partners as appropriate (e.g., the Exercise VORTEX scenarios). Fully integrate health and medical PIOs into joint information system.
   CAS -It was observed that the **region should investigate forming a joint information center (JIC) process** for cyber security incidents.
   P/T/E

3. (Vortex and VFR) **Disseminate prompt, accurate information to the public in languages and formats that take into account hard to reach communities and access and functional needs** and consider reaching out to non-high tech community members and those with access and functional needs within the community. Information was not given to the community about the situation, disseminating vital disaster info (location of shelters, food, water, collapsed areas etc).
   Add to the WebEOC resource list access and functional needs resources.
   In VFR it was suggested that the region develop a Crisis Communications Network. P/T/E

4. (Vortex/Englewood AS) Public Information for ESF #8 partners should be **coordinated through an effective joint information system** and integrated into an established system lead by the impacted jurisdiction. P/T/E

F. INFRASTRUCTURE SYSTEMS

1. DAMAGE ASSESSMENT:

a. (Vortex) **A debris management/damage assessment plan does not exist.** A clear set of guidelines (standard operating procedures) is lacking for Damage Assessment Teams to follow in the collection of data. P/T/E

b. (DAW) Some groups were completely **missing damage assessment forms** or even a recovery plan. P/T/E

c. (DAW) The dynamic between the different stakeholders, namely between **government and NGOs, needs improvement.** Clarification of who has authority and the differences between NGO forms and government forms needs work. P/O/T/E

G. INFO SHARING AND INTEL

1. (VFR) **Information was not properly disseminated to appropriate agencies**. Consider developing additional measures to ensure correct information sharing practices. P/O/T/E

2. (VFR) **Intel sharing between CIAC, APD, and Buckley was almost nonexistent**. Augment the TLO program and ensure the CSPD model is used across the state. Train and exercise with TLOs. P/O/T/E

3. (VFR) **There were breakdowns in information flow.** Research and clarify how information should flow and develop SOP detailing how notifications should be made between agencies. Additionally develop alternative ways to communicate information such as text messages. Utilize Law Enforcement Online when appropriate. P/O/T/E

4. (VFR) **There was a disconnect between intel personnel and detectives at times.** Assemble a working group to address the issue. P/O/T/E

5. (VFR) **The CIAC email system of email notification may not be effective method for real-time updates.** (The following information may be outdated, but at the time of the VFR IP this was accurate…In the event of a large incident, CIAC should immediately respond to the scene with a communications capability to work directly with the designated command post.) Additionally many agencies are **not on the distribution list** for the CIAC and this may not make it to

everyone who needs to know immediately. Find **a system that can work** to get the right information to the right people (EMSystems was suggested at the time this report was written). P/O/T/E

6. (Tri-County TTX) There is an **inconsistent use of information sharing software** across disciplines (EM Resource/WebEOC). No plan was discussed of how to deal with the inconsistent use of information sharing software. P/O/T/E

7. (CS/CAS) There is no cybersecurity intelligence sharing plan or system for incidents across jurisdictions within Colorado. P/T/E

8. (BC) Public Information and Warning: Information related to food safety during and following a prolonged power outage was not shared in a timely manner nor with a targeted audience, such as restaurants. P/O

H. CYBERSECURITY

1. IT DEPARTMENTS/JURISDICTION LEVEL:

a. (CS) **Policies and training** related to phishing emails and other cyber threats are old and/or outdated within most jurisdictions across the NCR. P

b. (CS) Not all organizations are **staffed** at the same level within IT Departments including **education and certification requirements to ensure cyber security**. Some jurisdictions have more IT professionals with more certifications and education, therefore plans, policies, and level of vigilance are higher in some areas. P/O/T

c. (CS) Jurisdictional **Help Desk personnel** (most) do not **have policies, plans and checklists** that outline procedures for phishing email response levels**.** P

d. (CS) **Jurisdictional plans (most) do not address notifications and communication during a denial of services incident.** P/T/E

e. (CS/CAS) Jurisdictional and organizational cyber security plans and processes have not been fully developed across the NCR. Most local jurisdictional **plans are not scaled for a large cyber-attack** at this point nor would they be ready for a joint physical and cyber-attack. P/T/E

f. (CS/CAS) **There is no intelligence sharing system related to cyber incidents across jurisdictions within Colorado.** ADDED TO INFO SHARING AS LARGER CONCERN ACROSS DISCIPLINES/HAZARDS

g. (CS/CAS) **Resources** have not been identified for a response or recovery to a cyber-attack. **Mutual Aid Agreements** are also not in place. All NCR stakeholder organizations participating in the TTX specified the need to have in place

memorandums of understanding (MOU) and memorandums of agreements (MOA) with both private sector partners and local neighboring organizations that have the capability to provide support for cyber incident response, prior to cyber incidents. P/T/E

h. (CS/CAS) Most jurisdictions do not have robust **recovery plans that account for the complexity of a cyber-attack**. P/T/E

i. (CS) Current **plans, policies and resource understanding does not necessarily fit with a cyber-attack in their current state**; however, these same government plans, processes and structures could work for a cyber-attack with some special additions. P/T/E

j. (CFE) Jurisdictional and organizational cyber security **plans and processes have not been fully developed across the NCR.** P/T/E

k. (CFE) **Regional and jurisdictional best practices and system-specific countermeasures were not clearly developed and/or identified for each cyber-attack** (Distributed Denial of Service [DDoS] & Ransomware). P/O

l. (CFE) **Collaboration between partnering agencies was not fully developed, documented effectively, and practiced.** P/O/T/E

m. (CFE) **Proper backup systems were not in place** to continue the use of essential functions in the organization both locally and regionally. Eq

n. (CFE) **Regional and local processes and procedures on State mutual aid was unclear and not demonstrated.** It is unknown if it is possible on how State resources would legally prioritize, catalog, mobilize, track, and implement mutual aid regionally, locally, and privately during a cybersecurity attack. P/O

o. (CFE) The exercise illuminated the issue that there are **no standards in place, both locally and regionally, for determining when reports of cyber issues escalate from simple to complex or from an incident to an emergency.** P/O

p. (CFE) **It was unclear what the roles and responsibilities of support organizations are in a multijurisdictional cyber security attack.** P/O

q. (CFE) **There was no structure used/identified region-wide to share information between regional jurisdictions and organizations in an accurate, timely, and direct manner.** P/O/Eq

r. (CFE) **In several jurisdictions there was no public information officer (PIO) staff established during the FE.** P/O

s. (CFE) **Quick and accurate situational awareness both locally and regionally was difficult to obtain.** P/O/T/E

t. (CFE) **Regional assessment reporting form and processes were not completed and returned to CIAC.** P/O/T/E

u. (CFE) There were **no written policies or communication templates used to assist in maintaining and tracking standard awareness of critical information during the cyber security attack.** P/O/Eq/T/E

2. EMERGENCY MANAGEMENT:

a. (CS/CAS) **Emergency Management Offices within each jurisdictions should be prepared to assist during and after a cyber-attack as they do for other emergency situations.** Not all emergency management professionals have embraced this option or have explored this philosophy.
CAS-No regional system or process has been endorsed on how to gauge cascading effects during a multi-day attack.
P/T/E

b. (CS/CAS)**Mutual aid agreements** may need to be signed in advance. Local Emergency Management offices have a **plan for mobilizing and managing resources**. These resources and mutual aid agreements should be added to those plans. **There are no typed resources within local plans for specialized IT support.** P/T/E

c. (CAS) Existing **Continuity of Operations Plans (COOP) plans should be revised** to include cyber security incidents. P/T/E

d. (BC) **Transition of EOC staffing created difficulty**, as there were no trained, experienced Adams County staff available to assist with activation. EOC reorganization and staffing is currently underway. P/O/T/E

e. (BC) **There was a significant lack of trained shelter staff to assist**, which resulted in existing staff working long hours and one shelter being unable to open. P/O/T/E

f. (BC) WebEOC was not accessible to all staff who did not maintain individual logins and passwords P/O/T/E

3. FATALITY MANAGEMENT

a. (MSO) **Jurisdictions do not have local plans that address surge operations**. P

b. (MSO) **Coroner/Medical Examiner (C/ME) office expect that internal exams will be conducted on every decedent** involved in a law enforcement related incident where prosecution may occur which may not be feasible for large numbers of fatalities. P/O/T/E

c. (MSO) **Denver Public Health Duty Officer did not properly communicate message to activate the Regional Plan** via SendWordNow and notification to committee members did not occur. O/T/E

d. (MSO) **Players did not know how to conduct a call activating the regional plan using the plan's template agenda.** O/T/E

e. (MSO**) There is a training gap between resource ordering and mobilization.** Players attempted to request resources through outside processes and organizations and not through the jurisdictional Emergency Operations Center (EOC). P/O/T/E

I. PLANS DEVELOPMENT

1. EVACUATION PLANNING

a. (DAT) Local agencies need additional collaboration and established procedures regarding a **large-scale evacuation** during an incident. P/Eq/T/E

2. PRE-PLANNING

a. (BC) **Identify emergency shelters** along the highways. (BC) Pre-storm regional shelter planning for sheltering/warming center operations, including **strategic pre-positioning of shelter cache supplies**. 4x4 support mechanisms were not pre-planned. **Expand shelter equipment caches in emergency shelter locations**. The Fire District was forced to use one of their stations as a shelter, which is not really designed to shelter people. Pre-identified evacuation center locations may not be sufficient to support sheltering operations caused by a power outage. Homelessness preparedness and sheltering needs to be planned for and information provided to the hospitals. P/O/Eq

b. (BC) **Facilities should pre-plan for impacts to staffing** (sheltering and transportation) during weather related incidents. **A recommendation is to advise the facilities to arrange transportation to and from work ahead of winter storms.** P/O

c. (BC) **Healthcare facilities and emergency management should plan around oxygen shortages for future incidents.** P/O/Eq

d. (BC) **Pre-identify more resources** (generators, cabling, locations with transfer switches, electricians, trade staff etc.) both in-house and contract. P/O/Eq

e. (BC) Planning Section: **There was no operational planning section to properly plan and document the event, while establishing distinct operational periods**. P/O/Eq/T/E

J. MASS CARE

1. TRAINING

a. (BC) Include **School District transportation personnel in EOC trainings and activations.** P/O/T/E

b. (BC) **Identify and train more personnel for EOC ESF 6 desk**. P/O/T/E

c. (BC) There is a need to **increase training and provide clarification of roles for Senior Leadership and EOC staff during disaster response.** (County Manager's Office) P/O/T/E

d. (BC) **Provide preparedness education to the community and business partners regarding their roles and impact on disasters.** (County Manager's Office) P/O/T/E

e. (BC) The shelter was extremely short staffed. **Additional trained staff, and additional training for existing staff, is needed.** P/O/T/E

f. (BC) **Response identified a gap in ICS training and understanding.** P/O/T/E

g. (BC) Eleven Amateur Radio Emergency Services (ARES) members checked in and 6 indicated ability to deploy; prepared to support 4 sites with radios, but **specific details including site contacts, tasks, and timing were undefined**. P/O/Eq/T/E

2. COMMUNICATIONS/NOTIFICATIONS

a. (BC) Court Cancellation: **No arrangements were made by Courts to close the court and notify citizens arriving for court.** The Police Department was at minimum professional staffing levels and were deviated from their duties to manage the crowds of people assembled in the lobby for court. P/O

b. (BC) Civic Center Closure during Normal Business Hours: **No arrangements were made by any other City department to secure the facility.** There are limited capabilities for citizens to get emergency assistance from outside the Civic Center. P/O

c. (BC) External Communications: Aside for PD resources, **there was no activation of an external communications plan or personnel to ensure someone is**

focusing on timely and accurate information reaching the public, the media and stakeholders. P/O/T/E

d. (BC) Internal Communications Protocol: **The use of the system in preparation for or the unplanned activation of a major event is not adequate to notify and/or recall key personnel with the city organization.** P/O/T/E

e. (BC) Communications issues between on-scene personnel, Police Branch, and Evacuation Branch; **PD training needed on EOC functions and the required partnership.** P/T/E

f. (BC) **There is a need to increase coordination with DIA regarding release of their employees**, which caused significant challenges, as many of them got stuck on their way out. P/O/T

3. RESOURCE MANAGEMENT

a. (BC) **There was some confusion and competition for resources**, such as with Aurora and the Snow Cat, especially after Aurora EOC closed, which caused some resources to seemingly disappear. The County had to rely on other agencies for important resources which caused a significant delay in getting the resources. P/O/Eq/T/E

b. (BC) **Cache sustainment, maintenance, and availability.** P/O/Eq

c. (BC) Due to location of equipment the winter operations team did not have everything available in staging. There was a delay in SAR missions while the team dealt with equipment prep. P/O/Eq/T/E

d. (BC) **The reimbursement processes for supplies used at shelters needs to be clarified.** P/O

e. (BC) **No emergency power capabilities** at EVAC or Brighton Recreation Center. Power outages are prevalent during winter storms and identifying resources to aid access and functional needs populations during power outages is advised. Especially senior independent living housing, as there are no CMS requirements to help the senior citizens during power outages. One idea is to provide the Independent Senior Living facilities with a brochure that is available from Jefferson County Human Services for Power Outages. P/Eq/T/E

4. STAFFING

a. (BC) **Public Works Staffing and Equipment**: Public Works, aside from the snow plow crews, did not have any staff available to assist or deliver barricades, or assist with any other street related issues. P/O/Eq

b. (BC) PD Staffing Assessment: Aside from exempt staff, **there was no assessment in preparation for the storm to modify schedules, implement recalls and modify personnel assignments to accommodate citywide/PD needs, under emergency management rights**. P/O/Eq/T/E

c. (BC) Demobilization: The demobilization process did not include activities to demobilize staff, partners, and DOC, such as EOI alerts to impacted partners and forwarding DOC phones to monitored phone lines. No Shelter Demobilization checklist so it was unclear as to whose responsibility it was to pack up resources after shelter was closed. P/O/T/E