

**MILE HIGH DICE
ELECTRIC SECTOR WORKSHOP & TABLETOP EXERCISE**

***Prolonged Power Outage Workshop
from an agency or business point of view***



COLORADO FEDERAL
EXECUTIVE BOARD
colorado.feb.gov



FEMA

Mile High Dice FY-2019

Prolonged Power Outage from an agency or business point of view Workshop & Table Top Exercise (TTX)

November 15, 2018

After Action Review

November 28, 2018

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Handling Instructions

1. The title of this document is the Mile High Dice FY-2019 Electric Sector *Prolonged Power Outage from an agency or business point of view* Workshop & Table Top Exercise (TTX) After Action Review (AAR).
2. The information gathered in this AAR is UNCLASSIFIED. The control of information is based more on public sensitivity regarding the nature of the exercise than on the actual exercise content.
3. All exercise participants should use appropriate guidelines to ensure the proper control of information within their areas of expertise and protect this material in accordance with current agency-specific directives.
4. Public release of exercise materials to third parties is at the discretion of the Federal Emergency Management Agency (FEMA) Region VIII and the Colorado Federal Executive Board (CFEB).
5. For more information, please consult the following points of contact (POCs):

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Executive Summary

Mile High Dice is an annual continuity exercise hosted by the Colorado Federal Executive Board (CFEB) and the Federal Emergency Management Agency (FEMA). The exercise provides participants the opportunity to improve their continuity plans and procedures by learning the latest policy updates, discussing their response and contingency planning efforts, testing their planning assumptions, and sharing best practices. During the TTX portion of the event, agency representatives were seated at tables, based on their agency, with selected members of their group acting as a facilitator to encourage discussion, in addition to a scribe to capture their lessons learned.

The purpose of this event is to provide a forum for interagency coordination and improvement of continuity and response plans – The 2018 theme of a prolonged power outage ties to Critical Infrastructure, which is the Colorado Preparedness Coalition's (CPC) priority this year. The CPC consists of the Colorado Emergency Preparedness Partnership (CEPP), State of Colorado Division of Homeland Security & Emergency Management (CDHSEM), CFEB & FEMA. Today's objectives center on the Electric Sector and include:

1. Develop a common understanding of:
 - What is the Power Grid;
 - What are the risks/vulnerabilities of the Power Grid; and
 - How do we mitigate against the risks and vulnerabilities.
2. Facilitate active learning opportunities and peer-to-peer exchanges, highlighting beneficial redundancies and identifying potential gaps in long-term continuity plans; and
3. Examine and assess plans, processes, and procedures for responding to, and recovering from a prolonged power outage and discuss potential solutions/mitigation measures to lessen its impact.

The exercise was conducted on Thursday, November 15, 2018 at the Bureau of Prisons National Corrections Academy, 11900 East Cornell Ave, Aurora, CO between 7:30 AM and 3:45 PM.

Overall, Mile High Dice Prolonged Power Outage Workshop successfully provided a learning environment that presented an opportunity for agencies to review their essential functions and interact with other agencies and reinforce the need for robust response and continuity planning, training, and exercises.

This report will analyze the workshop results, identify strengths to be maintained and built upon, identify potential areas for further improvement, and support development of corrective actions.

Major Strengths of Event Design

The major strengths identified during this exercise are as follows:

- Participants indicated that they have implemented action items or are planning to implement action items based on the lessons of a prolonged power outage.
- A basic understanding of the Power Grid, risks and vulnerabilities, and mitigation measures.
- The presentation of new information, exchange of ideas, networking opportunities and lessons learned.
- Having a training element, followed by a focused table top discussion.
- Ease of registration, range of agencies represented, and collaboration between government and private industry.

Primary Areas for Improvement for Event Design

Opportunities for improvement were identified throughout the event. The primary areas for improvement, including recommendations, are as follows:

Observation 1: *More networking activities.*

Issue: The welcoming and opening remarks portion ran long, therefore the first networking break, which had been planned for 25 minutes, was reduced to 15 minutes.

Recommendation:

- Allow the full 25-minute networking session during the first break, and adjust as needed.
- Apply a measured concept:
 - o First break: 25 minutes.
 - o Lunch: 1 hour
 - o All following breaks: 15 minutes.

Observation 2: *More time is needed for the tabletop exercise.*

Issue: The majority of the day was dedicated to training, followed by one exercise scenario.

Recommendation: Allow more time for exercise play.

- Consider interagency scenario/module so that everyone could understand what other agencies would be doing in the scenario and where efficiencies or limitations can be found
- Mix-in exercise in between training presentations to keep people engaged

Observation 3: *Table assignments that enhance interagency networking.*

Issue: Examining and assessing plans, processes, and procedures internally is an objective of Mile High Dice, and that leads to table assignments by organization.

Recommendation:

- Start out with people assigned to tables NOT with their own agencies to enhance interagency networking and then move people to their organization's table for the tabletop.

Other recommendations:

- Consider interagency module so that everyone could understand what other agencies would be doing in the scenario and where efficiencies or limitations can be found
- Mix-in exercise in between training presentations to keep people engaged (multiple responses)
- Recommend tying the training to National framework for Incident Command System (ICS)
- Develop an interactive scenario that forces different entities to have to collaborate and then brief their organizational part in the scenario
- Reduce number of speakers and shorter presentations
- Thursday, Nov 14, 2019 may be a better host day for some planning members. Wednesday, Nov 13, is not a good date for members of the emergency preparedness coalition.
- Link to the emergency preparedness coalition theme for next year:
Soft Target
 - Link to Intel/information sharing within emergency management and Homeland Security agencies both before and during disaster.

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Exercise Overview

Exercise Name

Mile High Dice, FY-2019, Electric Sector *Prolonged Power Outage from an agency or business point of view*

Type of Exercise

Training and lessons learned seminar, followed by a short tabletop exercise

Exercise Date

November 15, 2018

November 28, 2018 After Action Review

Duration

One Day

Location

Bureau of Prisons

National Corrections Academy

11900 East Cornell Ave, Aurora, CO 80014

Sponsors

Colorado Federal Executive Board

FEMA Region VIII

Mission

Response Operations/COOP/Essential Functions/Prolonged Power Outage

Scenario Type

A weather induced, recoverable, long term (up to 7 days) loss of power and the ability to sustain essential functions

Participating Agencies & Organizations

Colorado Department of Labor & Employment
 Colorado Department of Public Safety/Colorado Information Analysis Center
 Colorado Department of Public Safety/Division of Homeland Security & Emergency Management
 Colorado Department of Regulatory Agencies/Public Utilities Commission
 Colorado Department of Transportation
 Colorado Emergency Preparedness Partnership/Downtown Denver Partnership
 Colorado Federal Executive Board
 Defense Health Agency
 Denver Office of Emergency Management
 Department of Commerce/Economic Development Administration
 Department of Commerce/National Institute of Standards and Technology
 Department of Commerce/National Oceanic & Atmospheric Administration
 Department of Defense/AF Installation and Mission Support Center, Detachment 1, Peterson Air Force Base
 Department of Defense/AF Space Command
 Department of Defense/Defense Coordinating Element
 Department of Defense/US Army Corps of Engineers
 Department of Energy/(ESF-12)
 Department of Energy/Western Area Power Administration
 Department of Health and Human Services/US Food and Drug Administration
 Department of Homeland Security/Federal Emergency Management Agency
 Department of Homeland Security/Federal Protective Service
 Department of Homeland Security/Office of Infrastructure Protection
 Department of Homeland Security/US Citizenship & Immigration Services
 Department of Homeland Security/Transportation Security Administration
 Department of Housing & Urban Development
 Department of the Interior/Bureau of Reclamation
 Department of the Interior/Office of Natural Resources Revenue
 Department of Justice/Bureau of Prisons
 Department of Labor/Occupational Safety and Health Administration
 General Services Administration
 National Archives and Records Administration
 National Park Service, Rocky Mountain National Park
 National Transportation Safety Board
 Selective Service System
 Tri State Generation and Transmission
 United States Environmental Protection Agency
 United States Patent and Trademark Office
 Xcel Energy
 Wyoming Office of Homeland Security

Number of Participants

- 39 Agencies & Organizations
 - ~ 152 Participants
 - Federal Government: 74%
 - State Local Government: 18%
 - Private Sector: 8%
 - Other: 0%

68 (45%) Participant Evaluation Surveys were received.

Exercise Design Summary

Purpose

The purpose of this event is to provide a forum for interagency coordination and improvement of continuity and response plans – The 2018 theme of a prolonged power outage ties to Critical Infrastructure, which is the Colorado Preparedness Coalition’s (CPC) priority this year. The CPC consists of the Colorado Emergency Preparedness Partnership (CEPP), State of Colorado Division of Homeland Security & Emergency Management (CDHSEM), CFEB & FEMA. Today’s objectives center on the Electric Sector and include:

Exercise Purpose and Objectives - TTX

1. Develop a common understanding of:
 - What is the Power Grid;
 - What are the risks/vulnerabilities of the Power Grid; and
 - How do we mitigate against the risks and vulnerabilities.
2. Facilitate active learning opportunities and peer-to-peer exchanges, highlighting beneficial redundancies and identifying potential gaps in long-term continuity plans; and
3. Examine and assess plans, processes, and procedures for responding to, and recovering from a prolonged power outage and discuss potential solutions / mitigation measures to lessen its impact.

Exercise Scenarios – TTX (Discussion-Based Exercise)

Organizations were presented an overall scenario event, followed by one (1) module, *48-24 hours before power loss*. At the end of the scenario presentation, table facilitators asked a series of questions to encourage participants to discuss actions, recommendations, solutions and other ideas. Once the questions were discussed within the event, the Exercise Director had a spokesperson from selected organizations brief out their key issues.

This methodology allowed participants to validate the current concept of operations and discover strengths and challenges inherent in the plans. It also provided the participants with an understanding of policies, tactics, techniques, and procedures that are currently in effect and to share challenges and solutions with each other.

Exercise Schedule – Training/TTX

Time (MST)	Session	Comments
7:30 am	Registration	Participants sign in
8:00 am	Welcome	<p>Opening comments</p> <ul style="list-style-type: none"> • Mr. Jim Gray, <i>Director, Bureau of Prisons-National Corrections Academy</i> • Mr. Fred Eidson, <i>Executive Director, Colorado Federal Executive Board (CFEB)</i> • Ms. Nancy J. Dragani, <i>Deputy Regional Administrator, FEMA Region VIII, and Colorado FEB Chair</i> • Mr. Shawn Graff, <i>Regional Director, DHS/Office of Infrastructure Protection</i> <p>Introductions & Continuity Basics</p> <ul style="list-style-type: none"> • Mr. Mike Brinkman, <i>Regional Continuity Manager, FEMA Region VIII</i> • Mr. Gilbert D. Flores, <i>Emergency Management Specialist, Western Area Power Administration</i>
8:40 am	Training #1	Mr. Steve Yexley <i>Western Area Power Administration, Vice President of Technical Services</i>
9:30 am	Networking	Break (Optional: Facilitator Training)
9:55 am	Training #2	Mr. Bob Johnson, <i>Principal Operations Engineer</i> Mr. Mark Newby, <i>Director, Xcel Energy Colorado Control Center</i> <i>Xcel Energy Responsible by Nature</i>
12:00 pm	Lunch	On your own
1:00 pm	Training #3	Mr. Peter Navesky <i>US Army Corp of Engineers, Emergency Operations Specialist</i> <i>Permanent Cadre ESF #3 Team Leader</i>
1:30 pm	Panel Discussion	All Presenters (Q&A)
2:00 pm	Networking	Break
2:15 pm	TTX Scenario #1 Out brief(s)	48-24 Hours Before Power Loss Exercise Director Mike Brinkman
3:30 pm	Hot Wash / Final Comments	Exercise Director Mike Brinkman
3:45 pm	Adjourn	

Analysis of Objectives

This section of the report reviews the performance of the exercised objectives, activities, and tasks. Observations are organized by objective, followed by a summary and corresponding observations and recommendations.

OBJECTIVE 1: DEVELOP A COMMON UNDERSTANDING OF:

- **WHAT IS THE POWER GRID;**
- **WHAT ARE THE RISKS/VULNERABILITIES OF THE POWER GRID; AND**
- **HOW DO WE MITIGATE AGAINST THE RISKS AND VULNERABILITIES.**

Observation: Successful

Analysis:

The majority of the survey respondents stated that they have a better understanding of the power grid, risk and vulnerabilities, and mitigation measures after attending this training and exercise. A follow-on table Top Exercise/Workshop will be offered 3 times in 2019 to leverage the information received during Mile High Dice, discussing the challenges, issues and cascading impacts associated with conducting mission essential functions following a long-term power failure. Also, Resource websites were provided as part of the Participant Handbook as well as an emphasis item during the closing comments portion of the Power Point slideshow.

Discussion:

A catastrophic power outage within FEMA Region VIII presents a significant danger to lives, infrastructure, and critical lifeline sectors with power interdependencies. A large scale power outage impairs social and economic processes that citizens require to meet their needs, therefore, it is imperative that agencies place an emphasis in Response and Continuity planning efforts. Some tables commented that they were not aware of what there generator requirements were, or if their current generator plan meets the needs of the organization.

Recommendations:

1. Assess risk and mitigation measures so that decision makers can take informed action during a prolonged power outage to ensure their organization's mission essential functions (MEFs) continue throughout, or resume rapidly after, a disruption of normal activities.
2. Identify or communicate backup offices who would take over if devolution was required. Create a devolution checklist of actions, standard operating procedures, and instructions for backup communications (i.e. satellite phones).
3. Agencies may use the Resource Reference List contained on the last page of the Participant Handbook as a starting point for assistance from other governmental agencies.

OBJECTIVE 2: FACILITATE ACTIVE LEARNING OPPORTUNITIES AND PEER-TO-PEER EXCHANGES, HIGHLIGHTING BENEFICIAL REDUNDANCIES AND IDENTIFYING POTENTIAL GAPS IN LONG-TERM CONTINUITY PLANS

Observation: Successful

Analysis:

The workshop was not intended to be a version of a grid security exercise (GridEx), which is a biennial operational exercise with utilities and stakeholders from North America. The focus of GRIDEX is on the electrical grid, and other critical infrastructures, and how the utility companies demonstrate their response recovery actions to a simulated coordinated cyber and physical security incident. Mile High Dice was intended to be a training and exercise opportunity that focuses on internal agency, or business, and the resources they have influence on. The idea is to look internally at:

- Incident Response and/or Continuity plans;
- Local and regional response depending on the size of your organization;
- Interdependencies;
- Communication Plans;
- Lessons Learned; and
- Engage Senior Leadership

Facility readiness requires that managers develop and exercise response plans that apply general preparedness and response protocols to specific types of emergencies and facility capabilities.

Discussion:

Participants received briefings on the evolution of the power grid, case studies of prior power outages, black start planning and mitigation measures they can take to be better prepared. The table top exercise promoted a facilitated discussion, each table group examined plans, procedures and challenges for their organization. The scenario was described by the Exercise Director to provide a common background so that the table facilitator could walk the group through the questions provided.

Recommendations:

1. Identify and implement Continuity planning into operational planning; COOP is not a place or all or nothing, it offers strategies that can be applied to an all hazard event. A government-centric approach to a prolonged power failure will not be enough to meet the cascading difficulties of water supply and wastewater treatment, telecommunications, transportation, refining, healthcare, the list goes on...It is vital that citizens, households, communities, businesses and governments be prepared to meet this challenge. Engaging the whole community and empowering local action will better position stakeholders to plan for and meet the actual needs of a community and strengthen the local capacity to deal with the consequences of all threats and hazards

OBJECTIVE 3: EXAMINE AND ASSESS PLANS, PROCESSES, AND PROCEDURES FOR RESPONDING TO, AND RECOVERING FROM A PROLONGED POWER OUTAGE AND DISCUSS POTENTIAL SOLUTIONS / MITIGATION MEASURES TO LESSEN ITS IMPACT

Observation: Mostly successful

Analysis:

Recognizing what are mission essential functions allows the conversation to expand into the structures and challenges for assessing key features of a viable continuity program.

Discussion:

Among the highest rated portion of the event identified that the table top discussion provided an opportunity to examine an organization's plans and procedures. Based on the lessons from Mile High Dice, nearly 63% plan to implement actions items discovered during the event while over 16% had indicated that they have already implemented changes.

Recommendations:

1. Organizations should establish a standardized continuity program management cycle. Continuity programs that address all elements of continuity: program management; essential functions; orders of succession; delegations of authority; communications and information systems; essential records management; alternate locations; human resources; devolution; reconstitution; TT&E; and, the four phases of continuity: (1) readiness and preparedness, (2) activation, (3) continuity operations, and (4) reconstitution, are likely to succeed.

Conclusion

Based on the participant feedback surveys, Mile High Dice, FY-2019 Prolonged Power Outage Workshop from an agency or business point of view training, table top exercise and lessons learned sharing was a success. On a scale of 1 to 5, the overall rating for this year came in at 4.6. Participants were able to evaluate their plans against the scenario, take lessons learned from each other, and find areas to improve their response and continuity programs.

Observations or areas for improvement for the next event include:

- See “Primary Areas for Improvement for Event Design” beginning on page 2

In addition:

- Have subject matter expert or guest speaker address how they approached, or were affected by, some of the questions posed in the table top module.
- Increase the awareness of whole community government involvement; what roles and functions will be accomplished by different levels of government or private sector.

Appendix A: Recommendations

Below is a consolidated list of the recommendations previously presented in the AAR:

Table A.1 *Recommendations*

Objective	Recommendations
More networking activities.	1. Allow the full 25-minute networking session during the first break, and adjust as needed. Apply a measured concept: <ul style="list-style-type: none"> ○ First break: 25 minutes. ○ Lunch: 1 hour ○ All following breaks: 15 minutes.
More time is needed for the tabletop exercise.	2. Allow more time for exercise play. <ul style="list-style-type: none"> ○ Consider interagency scenario/module so that everyone could understand what other agencies would be doing in the scenario and where efficiencies or limitations can be found ○ Mix-in exercise in between training presentations to keep people engaged
Table assignments that enhance interagency networking.	3. Start out with people assigned to tables NOT with their own agencies to enhance interagency networking and then move people to their organization's table for the tabletop.
Other recommendations.	4. Consider interagency module so that everyone could understand what other agencies would be doing in the scenario and where efficiencies or limitations can be found 5. Mix-in exercise in between training presentations to keep people engaged (multiple responses) 6. Recommend tying the training to National framework for ICS 7. Develop an interactive scenario that forces different entities to have to collaborate and then brief their organizational part in the scenario 8. Reduce number of speakers and shorter presentations 9. Thursday, Nov 14, 2019 may be a better host day for some planning members. Wednesday, Nov 13, is not a good date for members of the emergency preparedness coalition. 10. Link to the emergency preparedness coalition theme for next year: 11. Soft Target 12. Link to Intel/information sharing within emergency management and Homeland Security agencies both before and during disaster.

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Appendix B: Participant Feedback Survey (via Survey Monkey)

Mile High Dice - November 15, 2018

Name: _____ Title: _____

Organization/Company Name: _____

What classification best describes your organization?

Private Sector State/Local Govt. Tribal Territorial Federal Govt.

Other: _____

Have you implemented any of the action items identified from the exercise?

Yes No Planning to Implement

Part I: Assessment of Design and Conduct

Please rate, on a scale of 1 to 5, your overall assessment of this event.

Assessment Factor	Strongly Disagree					Strongly Agree				
I have a better understanding of the Power Grid, risk & vulnerabilities, and mitigations after attending this training and exercise	1	2	3	4	5	1	2	3	4	5
The design was conducive to group discussion	1	2	3	4	5	1	2	3	4	5
The electric sector training scenarios were helpful in understanding lessons from real life case studies	1	2	3	4	5	1	2	3	4	5
The tabletop discussion helped provide an examination of my Continuity and Response plan and procedures incorporating all hazards.	1	2	3	4	5	1	2	3	4	5
The exercise team (director and facilitators) were professional and worked toward my needs.	1	2	3	4	5	1	2	3	4	5
I believe the exercise will enhance my organization's resiliency.	1	2	3	4	5	1	2	3	4	5
The information received during Mile High Dice was current and relevant.	1	2	3	4	5	1	2	3	4	5

Part II: Other Comments

What were you most satisfied with?

What were you least satisfied with?

Did our Training event meet your expectations?

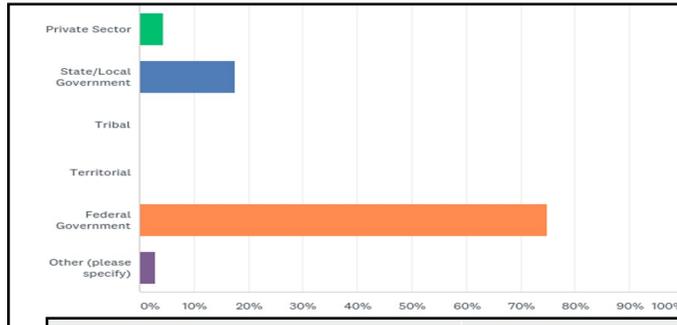
Please provide any other comments or recommendations regarding this event that may help in the development of future events.

What topic would you recommend for future Mile High Dice events?

Did your organization have lessons learned and organizational changes after the exercise?

Note: The figures below are based on 68 feedback form submissions

1. Have you implemented any of the action items identified from the exercise?



ANSWER CHOICES	RESPONSES
Private Sector	4.41% 3
State/Local Government	17.65% 12
Tribal	0.00% 0
Territorial	0.00% 0
Federal Government	75.00% 51
Other (please specify)	2.94% 2
TOTAL	68

Investor owned utility & military

2. Assessment Factor

Assessment Factor	STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE	TOTAL	WEIGHTED AVERAGE
The training and exercise... I have a better understanding of the Power Grid, risk & vulnerabilities, and mitigations after attending this training and exercise	3.03% 2	0.00% 0	4.55% 3	43.94% 29	48.48% 32	66	4.35
The design was conducive to... The design was conducive to group discussion	4.55% 3	6.06% 4	21.21% 14	40.91% 27	27.27% 18	66	3.80
The featured speaker's... The electric sector training scenarios were helpful in understanding lessons from real life case studies	4.55% 3	4.55% 3	6.06% 4	53.03% 35	31.82% 21	66	4.03
The tabletop discussion... The tabletop discussion helped provide an examination of my continuity and response plan and procedures incorporating all hazards	1.52% 1	3.03% 2	10.61% 7	39.39% 26	45.45% 30	66	4.24
The exercise team (direct... The exercise team (director and facilitators) were professional and worked toward my needs	3.03% 2	0.00% 0	3.03% 2	18.18% 12	75.76% 50	66	4.64
I believe the exercise wil... I believe this training event will enhance my organization's resiliency	6.06% 4	0.00% 0	9.09% 6	43.94% 29	40.91% 27	66	4.14
The information... The information received during the Mile High Dice was current and relevant	4.55% 3	1.52% 1	4.55% 3	33.33% 22	56.06% 37	66	4.35

3. What were you most satisfied with?

- The staff's professionalism
- The flow of training and information provided about electrical grid (multiple responses)
- Networking very useful (multiple responses)
- Table Top Exercise (multiple responses)
- "It was one of the more substantive discussions on electrical grid issues I have attended in recent years"
- Quality of speakers
- Training facility, scenario, and level of expertise of panel (multiple responses)
- Breadth of knowledge shared at event
- Ease of registration
- Quality of information
- Range of agencies represented at the event
- Panel discussion was very helpful
- Coming from private industry, collaboration with government partners was great
- Getting us out on time

4. What were you least satisfied with?

- Most of day was spent with presentations and seemed to be overlap (multiple responses)
- TTX needed more time to walk through to conclusions/action items (multiple responses)
- No interaction during first half of meeting with all presentations. Lots of listening
- Little bit too technical for some of the presentation. Focus on real examples and how ICS could apply for senior leaders in the scenario
- Presentations could be more brief (maybe 2 versus 3 speakers)
- More networking time with other agencies
- The discussion was not targeted to provide options for the end user. Since many organizations cannot control where their power comes from, it showed the limitations of company control
- More details or specifics from the Xcel representative would have been helpful
- Table top exercise could have run as an actual training scenario, to be able to realize the full affect of a situation as this, and see how each agency responds in turn
- Presentation deliveries were a little dry
- Powerpoint presentations were way too long. Need to shorten and at higher level
- "I like more exercise and less talk"
- There was no applicability to my organization????

5. Have you implemented any of the action items identified from the exercise?

- 68 responses out of 11 said yes and 43 plan to implement

6. Please provide any other comments or recommendations regarding event that may help in the development of future events

- More Tabletop exercise/discussion time needed (multiple responses)
- Start out with people assigned to tables NOT with their own agencies to enhance interagency networking and then move people to their organization's table for the tabletop
- Consider interagency module so that everyone could understand what other agencies would be doing in the scenario and where efficiencies or limitations can be found
- Mix-in exercise in between training presentations to keep people engaged (multiple responses)
- Recommend tying the training to National framework for ICS
- Develop an interactive scenario that forces different entities to have to collaborate and then brief their organizational part in the scenario
- Reduce number of speakers and shorter presentations

7. What topic would you recommend for future Mile High Dice events?

- Terrorism, flooding, and fire
- Same thing with natural gas incident (multiple responses)
- Regional outbreak of flu strains
- Pandemic (multiple responses)
- Tornado
- Wildfires
- Soft targets (multiple responses)
- Mutual Aid – how federal, state, and local agencies can partner in a disaster to assist each other
- Wild land fire, mass casualty (multiple responses)
- Reconstitution after a disaster (multiple responses)
- Major cyber attack (multiple responses), opioid epidemic, loss of I-70 Eisenhower tower
- Wind scenario
- Earthquake
- Scenario that challenges organizations from preparedness to response to reconstitution
- No notice cascading event scenario
- Civil unrest
- MCIs-it is what keeps me awake at night
- Best practices of coordination between HQ and regions
- Intel/information sharing within emergency management and Homeland Security agencies both before and during disaster

8. Did your org have lessons learned and org changes after the exercise?

- We need to communicate more with our backup regional office who would take over if we devolve, and create a devolution checklist of actions. Also need to create SOP and instructions for satellite phones.
-
- We discussed the location of our servers, backup servers and telework resources. The current plan for snow events is to telework, but that relies on having servers with power and connected to the internet. Data storage can be out of sight and out of mind, but if a power outage affects data storage, there needs to be a plan for that. We also discussed devolution, and procedures to clarify that process. Additionally, we considered which deadlines were actually flexible in an emergency and whether mission essential individuals were aware of their roles and responsibilities.
- Revise my emergency occupant plan to add telework options and remote location
- Not being able to receive or send out communications because of a prolonged power outage opened up some gaps. Insure other contingencies are in place for adequate communications during power outages.
- Exploring a second electric feed vs. a whole facility generator.

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Appendix C: Acronyms

Table C.1 *Acronyms*

Acronym	Term
AAR	After Action Report
CDHSEM	Colorado Division of Homeland Security & Emergency Management
CEPP	Colorado Emergency Preparedness Partnership
CFEB	Colorado Federal Executive Board
COOP	Continuity of Operations
CPC	Colorado Preparedness Coalition
DHS	U.S. Department of Homeland Security
EMI	Emergency Management Institute
FEMA	Federal Emergency Management Agency
MEF	Mission Essential Function
POC	Point of Contact
SME	Subject Matter Expert
TT&E	Test, Training, and Exercise
TTX	Tabletop Exercise

Appendix D: Glossary of Terms

This glossary explains some generic terms used in exercise planning, and those used during the development, conduct, and observation of the Mile High Dice FY-2019 Exercise. Terms are listed alphabetically.

After Action Review (AAR) - A comprehensive assessment of the exercise prepared by the evaluation team. It includes a summary of the exercise scope, scenario, participants, and play. Most importantly, it contains an analysis of the achievement of each exercise objective. It may also include an assessment of the exercise management process including the planning, control, and observation of the exercise. This report is developed from the comments and observations recorded by evaluators during and after the exercise. It identifies deficiencies, problems, and issues that require corrective action.

Continuity of Operations (COOP) - Continuity of Operations, as defined in Presidential Policy Directive-40 (PPD-40), is an effort within individual executive departments and agencies to ensure that Mission Essential Functions (MEFs) continue to be performed during a wide range of emergencies, including localized acts of nature, accidents and technological or attack-related emergencies.

Corrective Action Program (CAP) - The formal program that supports the identification and resolution of requirements for corrective action and the formal, appropriate integration of corrective action into interagency Continuity of Operations community. Managed by NCP with assistance from the CAP Review Board, the CAP ensures the continuing evolution and refinement of the Federal Executive Branch Continuity of Operations capability.

Exercise Planning Team - The exercise director, the deputy exercise director, and the senior controller. These are the senior personnel at the exercise location who oversee the actions of the evaluators, controllers, and interagency response cell members.

Exercise Objectives - The specific actions to be performed or the capabilities to be demonstrated by exercise participants. Developed early in the planning effort, effective exercise objectives will ensure that participants know what is to be accomplished, who will do it, under what conditions and finally to what measurable standard. Objectives are the basis for the assessment/observation effort.

Players - Exercise participants who respond in a realistic manner to the scenario events. They do so by using the plans, procedures, and equipment on which they have been trained. In other words, they demonstrate their ability to carry out their mission. Also referred to as responders in exercises.

Scenario - A sequential, narrative account of a hypothetical incident or accident. The scenario provides the catalyst for the exercise and is intended to introduce situations that will inspire responses and thus allow demonstration of the exercise objectives.