

Withering Daisy

After-Action Report/Improvement Plan

March 1, 2023

The After-Action Report/Improvement Plan (AA R/IP) aligns exercise objectives with preparedness doctrine to include the National Preparedness Goal and related frameworks and guidance. Exercise information required for preparedness reporting and trend analysis is included.

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EXERCISE OVERVIEW

Exercise Name	Withering Daisy
Exercise Date	December 5-6, 2022
Scope	This is a tabletop exercise, planned over a 2-day period. Exercise play is limited to NOAA and agencies with a stake/role in extreme heat events that impact the Las Vegas, NV area.
Mission Area	Mitigation & Response
Core Capabilities	Threat/Hazard Identification; Community Resilience; Communication
Objectives	<ol style="list-style-type: none"> 1. Discuss and create a suite of intervention actions aimed to reduce area-specific extreme heat exposure and vulnerabilities. Actions should include near-term opportunities that address heat impacts now, as well as longer-term opportunities that address heat impacts in the coming years to decades. 2. Identify area-specific needs that would support future planning and ways that NOAA can contribute. 3. Discuss and identify effective communication avenues to reach vulnerable populations with extreme heat-related information.
Threat or Hazard	Extreme and prolonged heat event
Scenario	Extended extreme heat in the Las Vegas area poses threats to the Electric Daisy Carnival event as well as to people experiencing homelessness. In addition, some residents are experiencing high heat in their homes as the power infrastructure is compromised.
Participating Organizations	<p>State of Nevada: HHS/Office of Minority Health & Equity, Public Utilities Commission, Division of Emergency Management, State Climate Office, Nevada Energy, State of Nevada, Southern Nevada Health District</p> <p>Clark County: Office of Emergency Management, Department of Environmental Sustainability, Social Service, School District, City of Las Vegas, Las Vegas MDP, City of Las Vegas, North Las Vegas Fire, City of Henderson, City of Henderson Parks & Rec</p> <p>Private and NGO: MGM Resorts International, Make the Road NV</p> <p>Regional Organizations: Southern Nevada Water Authority</p> <p>Academic Organizations: Desert Research Institute/Western Region Climate Center/CNAP, UNLV School of Public Health</p> <p>Federal Organizations: NOAA, FEMA</p>
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ANALYSIS OF CORE CAPABILITIES & OBJECTIVES

Aligning exercise objectives and core capabilities provides a consistent taxonomy for evaluation that transcends individual exercises to support preparedness reporting and trend analysis. Table 1 (on page 3) includes the exercise objectives, aligned core capabilities, and performance ratings for each core capability as observed during the exercise and determined by the evaluation team.

Core Capability	Objective	Performed without Challenges (P)	Performed with Some Challenges (S)	Performed with Major Challenges (M)	Unable to be Performed (U)
Threat/Hazard Identification	Discuss and create a suite of intervention actions aimed to reduce area-specific extreme heat exposure and vulnerabilities. Actions should include near-term opportunities that address heat impacts now, as well as longer-term opportunities that address heat impacts in the coming years to decades.		✓		
Community Resilience	Identify area-specific needs that would support future planning and ways that NOAA can contribute.		✓		
Communication	Discuss and identify effective communication avenues to reach vulnerable populations with extreme heat-related information.		✓		

Table 1. Summary of Core Capability Performance

Ratings Definitions:

- Performed without Challenges: The targets and critical tasks associated with the core capability were completed in a manner that achieved the objective(s) and did not negatively impact the performance of other activities. Performance of this activity did not contribute to additional health and/or safety risks for the public or for emergency workers, and it was conducted in accordance with applicable plans, policies, procedures, regulations, and laws.
- Performed with Some Challenges: The targets and critical tasks associated with the core capability were completed in a manner that achieved the objective(s) and did not negatively impact the performance of other activities. Performance of this activity did not contribute to additional health and/or safety risks for the public or for emergency workers, and it was conducted in accordance with applicable plans, policies, procedures, regulations, and laws. However, opportunities to enhance effectiveness and/or efficiency were identified.
- Performed with Major Challenges: The targets and critical tasks associated with the core capability were completed in a manner that achieved the objective(s), but some or all of the following were observed: demonstrated performance had a negative impact on the performance of other activities; contributed to health and/or safety risks for the public or for emergency workers; and/or was not conducted in accordance with applicable plans, policies, procedures, regulations, and laws.
- Unable to be Performed: The targets and critical tasks associated with the core capability were not performed in a manner that achieved the objective(s).

Note: The following information provides an overview of the performance related to each objective of this exercise.

Objective 1: Discuss and create a suite of intervention actions aimed to reduce area-specific extreme heat exposure and vulnerabilities. Actions should include near-term opportunities that address heat impacts now, as well as longer-term opportunities that address heat impacts in the coming years to decades.

The strengths and areas for improvement for each objective are described in this section.

Strengths

The partial capability level can be attributed to the following strengths:

Strength 1: Throughout this exercise, many already completed heat-related interventions and mitigation activities were discussed, which highlights the work Las Vegas and surrounding areas have achieved to reduce area-specific heat exposure and vulnerabilities. Although not all-encompassing, some examples include:

- [Southern Nevada Extreme Heat Vulnerability Analysis](#)
- [Strengthening Heat Resiliency in Communities of Color in Southern Nevada](#)
- [The State of Nevada Enhanced Hazard Mitigation Plan](#)
- City of Las Vegas' Tree Initiative
- Clark County's [All-In Sustainability & Climate Action Plan](#)
- [City of Las Vegas' 2050 Master Plan](#)

Strength 2: In the Las Vegas area, there are many organizations that participate or “own” portions of the area’s extreme heat-related preparedness, mitigation, response, and recovery activities. This exercise demonstrated how each of these organizations (federal, state, local, NGOs, etc.) work together to achieve this goal. In addition to the links above (*Strength 1*), coordination efforts are outlined in the Clark County Emergency Operations Plan (by Emergency Support Function (ESF)).

Strength 3: Through facilitated discussions, the exercise participants were able to effectively discuss and create the intended suite of intervention actions aimed both at near-term and longer-term actions for area-specific extreme heat exposure and vulnerabilities. (*See Appendix A: Improvement Plan for a list of top actions.*)

Areas for Improvement

The following areas require improvement to achieve the full capability level:

Area for Improvement 1: In this exercise, it was addressed that Las Vegas and the surrounding areas do not have a comprehensive heat management plan. The completion of this plan will help the affected areas identify, plan, and execute both near-term as well as longer-term intervention actions that address heat impacts.

Area for Improvement 2: Although many (if not all) of the organizations that have a role in extreme heat for the Las Vegas and the surrounding area were present at this exercise, it was pointed out that there is not a single person or office who has the lead to coordinate these efforts (like in other cities).

Area for Improvement 3: Various near- and longer-term activities were identified, however each will require additional exploration and planning to ensure the proper path to completion and execution can be achieved. *(See Appendix A: Improvement Plan for a list of top actions.)*

Objective 2: Identify area-specific needs that would support future planning and ways that NOAA can contribute.

The strengths and areas for improvement for each objective are described in this section.

Strengths

The partial capability level can be attributed to the following strengths:

Strength 1: Through NOAA’s Earth-observing satellites, information was used during this exercise to expose participants to the products and help them better understand extreme heat predictions.

Strength 2: Through the efforts of the National Integrated Heat Health Information System (NIHHIS) and the pilot NOAA project “Building Equitable Resilience to Extreme Heat”, Las Vegas and surrounding areas provided critical data related to heat. This data, including that from the other pilot locations (Phoenix, AZ; Charleston, SC; and Miami, FL), was used during the exercise to highlight indoor and outdoor heat statistics.

Strength 3: Through products such as the NOAA 8-14 day outlook for excessive heat, participants were able to determine many of the impacts and areas of concern for the Las Vegas and surrounding area during the exercise.

Areas for Improvement

The following areas require improvement to achieve the full capability level:

Area for Improvement 1: Continue to provide the Las Vegas and surrounding areas with additional area-specific climate datasets and information.

Area for Improvement 2: Provide ongoing support to the Las Vegas and surrounding areas as ongoing monitoring continues.

Area for Improvement 3: Continue to provide the Las Vegas and surrounding areas with vital weather/heat graphics, data, and other information to decision makers in the Las Vegas and surrounding areas to help ensure effective and informed life-saving decision making.

Objective 3: Discuss and identify effective communication avenues to reach vulnerable populations with extreme heat-related information.

The strengths and areas for improvement for each objective are described in this section.

Strengths

The partial capability level can be attributed to the following strengths:

Strength 1: Currently, Las Vegas and surrounding areas use many forms of communication to reach citizens and tourists about potential extreme heat as well as inform about the associated impacts. For example, the NOAA National Weather Service (NWS) provides heat-related outlooks, warnings, watches, and other valuable graphics and information intended to help those in the Las Vegas area be prepared. When heat events are predicted (or are happening), the local health department shares messages on protective actions and the location of cooling shelters. Most of these communications are shared via television, social media, traditional radio, and then by word of mouth.

Strength 2: Many organizations in the Las Vegas and surrounding areas provide educational information, documentation, trainings, etc. to help those effected by extreme heat understand the impacts and ways to reduce them. Although not a comprehensive list of heat-related educational information provided in the area, FEMA shares a [Be Prepared for Extreme Heat](#) fact sheet through ready.gov. In addition, the [Nevada Department of Emergency Management](#) (DEM) provides information and preparedness activities on their website intended for those who might experience the impacts of extreme heat. And the Southern Nevada Health District provides information on their website about [potential health concerns](#) for those dealing with extreme heat.

Areas for Improvement

The following areas require improvement to achieve the full capability level:

Area for Improvement 1: Although many communication avenues exist in the area, it was identified that not everyone receives this information and additional exploration and implementation is needed to better serve and protect the community related to extreme heat.

Area for Improvement 2: Innovative approaches to educational efforts in the Las Vegas area need to continue to ensure extreme heat is understood including its impacts, mitigation efforts, and what to do in case of an emergency.

APPENDIX A: IMPROVEMENT PLAN

This Improvement Plan (IP) has been developed specifically for those who participated in the Withering Daisy exercise conducted December 5-6, 2022. These documented recommendations are based on the participant’s discussions that occurred during the exercise.

Objective	Issue/Area for Improvement	Corrective Action	Primary Responsible Organization	Organization POC	Start Date	Completion Date
Discuss and create a suite of intervention actions aimed to reduce area-specific extreme heat exposure and vulnerabilities. Actions should include near-term opportunities that address heat impacts now, as well as longer-term opportunities that address heat impacts in the coming years to decades.	1. In this exercise, it was addressed that Las Vegas and the surrounding areas do not have a comprehensive heat management plan. The completion of this plan will help the affected areas identify, plan, and execute both near-term as well as longer-term intervention actions that address heat impacts.	a. Identify key representative needed to create a comprehensive Heat Management Plan.				
		b. Explore and research other heat plans from cities that experience similar extreme heat events (e.g., Phoenix, AZ).				
		c. Progress through the process to create a comprehensive Heat Management Plan specifically dedicated to the Las Vegas and surrounding areas.				
	2. It was pointed out that there is not a single person or office who has the lead to coordinate these efforts (like in other cities).	a. Outline process to elect/hire/etc. a Heat Officer (or authoritative department) for the Las Vegas and surrounding areas.				
		b. Identify a person/people to fill the new role of Heat Officer (or dedicated authoritative department).				

<p>3. Various near- and longer-term activities were identified, however each will require additional exploration and planning to ensure the proper path to completion and execution can be achieved.</p>	<p>c. Explore and discuss the feasibility of expanding area cooling centers to include churches, libraries, malls, etc.</p>				
	<p>d. Research local options to create additional shaded areas with art, layer shade, shade canopies, etc.</p>				
	<p>e. Develop area-specific plan to implement shade canopies (especially with landscaping growing under).</p>				
	<p>f. Explore feasibility, logistics, and resources required to implement semi-permanent shade structures (that could go down in the winter).</p>				
	<p>g. Explore funding sources and opportunities to offer residents solar options for their homes.</p>				
	<p>h. Identify and work with an engineer to learn about alternative concert techniques for both retrofitting as well as future projects.</p>				
	<p>i. Explore the feasibility and needed resources/logistics to redesign some parking lots (including "right sizing", turning into landscaped areas, etc.).</p>				
	<p>j. Continue to improve, encourage, and implement urban greening projects and</p>				

		efforts designed to reduce heat impacts.				
		k. Work with partners to explore possible incentives/rebates for residents to make heat-reducing improvements to their homes.				

Objective	Issue/Area for Improvement	Corrective Action	Primary Responsible Organization	Organization POC	Start Date	Completion Date
Identify area-specific needs that would support future planning and ways that NOAA can contribute.	1. Continue to provide the Las Vegas and surrounding areas with additional area-specific climate datasets and information.	a. Partner/collaborate with local stakeholders and agencies to ensure the NOAA climate datasets and information are included in the development of a TDF (temperature-duration-frequency) capability.				
	2. Provide ongoing support to the Las Vegas and surrounding areas as ongoing monitoring continues.	a. Provide Las Vegas and surrounding areas with additional evaluation actions (including indoor/outdoor monitoring info), wearable, mobile, and fixed monitors to see if UHI mitigation measures were effective.				
	3. Continue to provide the Las Vegas and surrounding areas with vital weather/heat graphics, data, and other information to decision makers in the Las Vegas and surrounding areas to help ensure effective and informed life-saving decision making.	a. Partner with NWS WFO to enhance short-term seasonal products used for heat information.				
		b. Continue to educate the local communities and surrounding areas about the NWS/WFO existing heat-related reports, graphics, data, etc.				
		c. Brainstorm (then implement) additional ways to make NWS heat information more widely accessible and how to better incorporate that information into various disciplines (e.g., social services).				

Objective	Issue/Area for Improvement	Corrective Action	Primary Responsible Organization	Organization POC	Start Date	Completion Date
Discuss and identify effective communication avenues to reach vulnerable populations with extreme heat-related information.	1. Although many communication avenues exist in the area, it was identified that not everyone receives this information and additional exploration and implementation is needed to better serve and protect the community related to extreme heat.	a. Continue to use and train people on the CPC outlook as well as other traditional and non-traditional NWS info/graphics.				
		b. Working with those organizations that play a role in heat events, identify, create, and implement coordinated and unified messages.				
		c. Explore the feasibility of dedicated social media staff to share heat-related message with agency audiences as well as mitigate false information/rumor control.				
	2. Innovative approaches to educational efforts in the Las Vegas area need to continue to ensure extreme heat is understood including its impacts, mitigation efforts, and what to do in case of an emergency.	a. Share additional information and graphics on heat illness and exhaustion with residents, tourists, etc.				
		b. Identify policy gaps and/or changes needed to improve area education and awareness. (Once identified, proceed through process to implement needed changes.)				
		c. Develop area-specific curriculum that includes taking care of plants and learning more about the specific ecosystem.				

		d. Create talking points for politicians targeting heat-related topics such as saving lives.				
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APPENDIX B: EXERCISE PARTICIPANTS

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**Denotes Exercise Design Team members.*

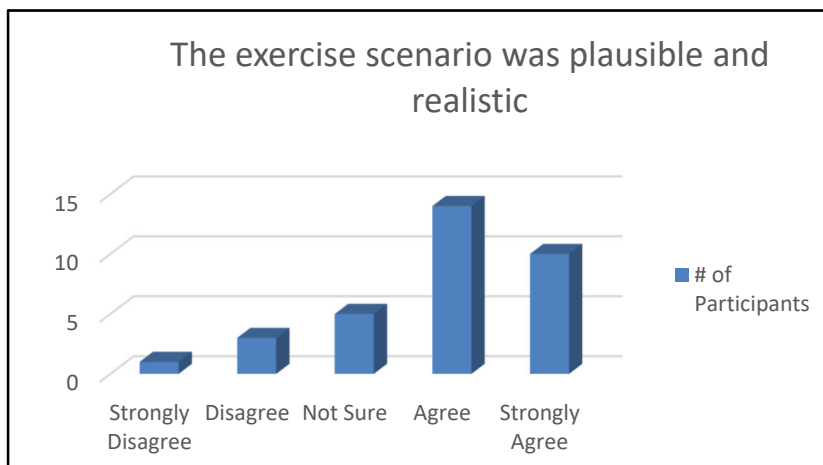
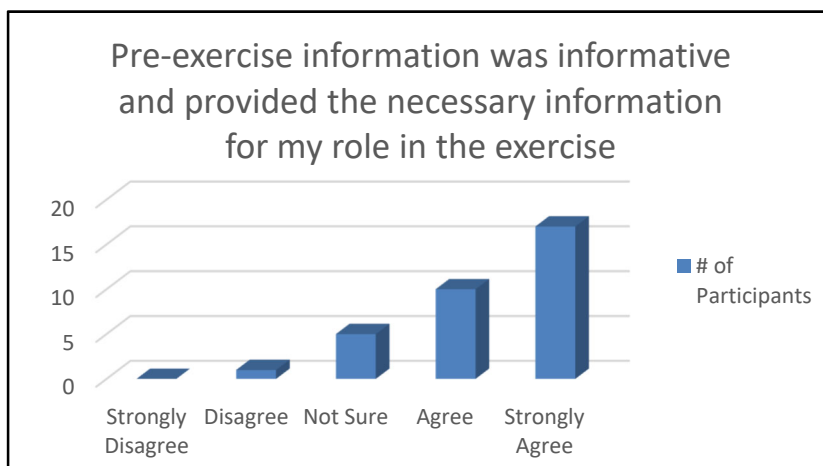
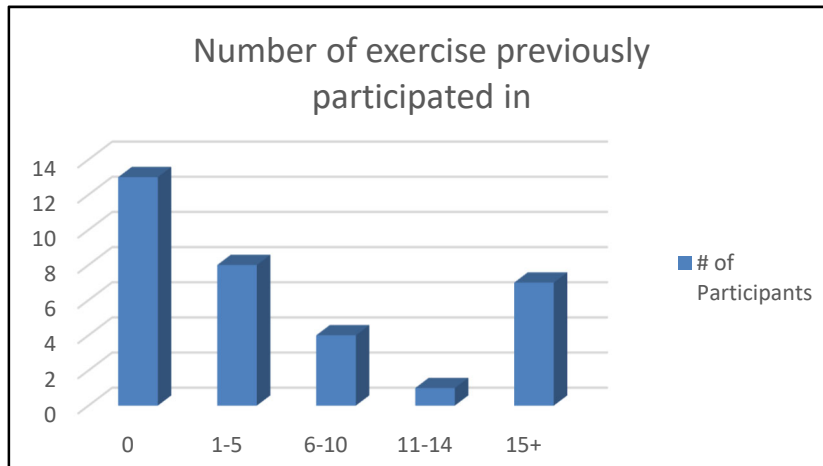
Some Planning Team Members were not able to attend:

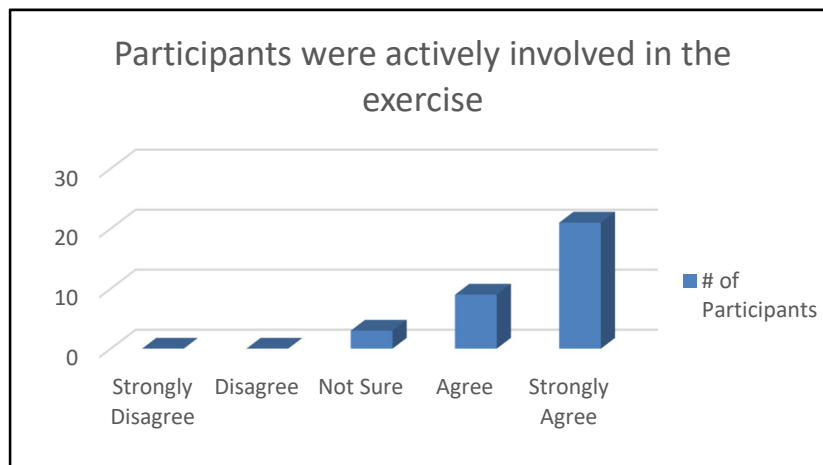
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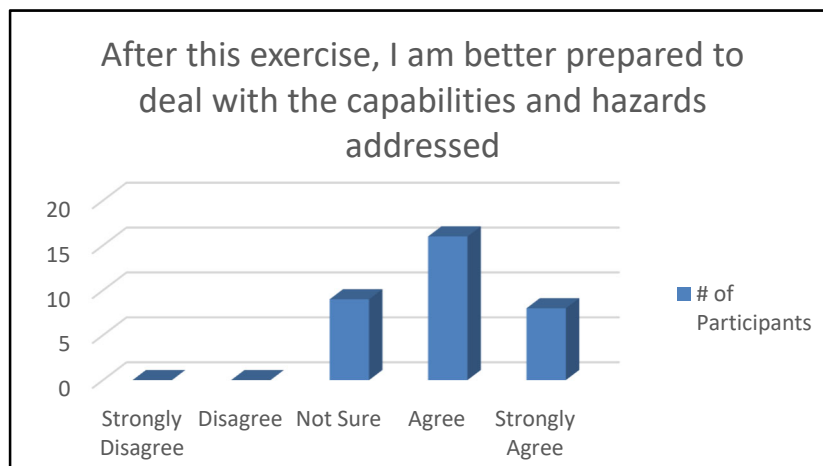
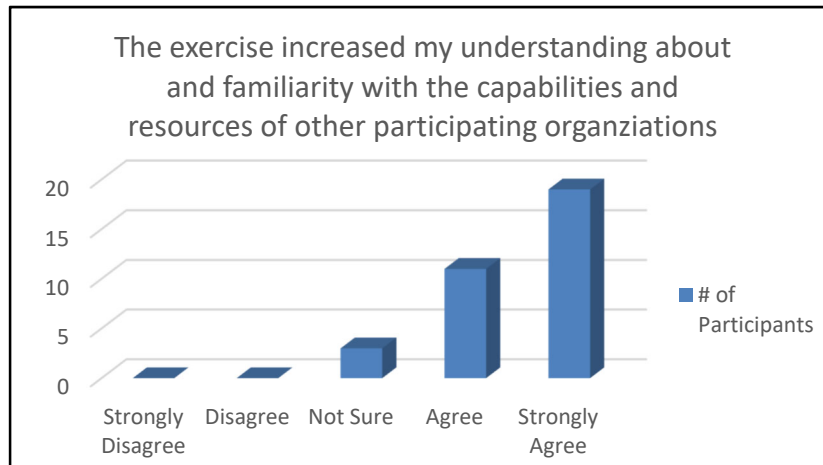
APPENDIX C: ACRONYMS

Acronym	Term
AAR	After Action Report
COOP	Continuity of Operations Plan
DPP	Disaster Preparedness Program
EH	Eagle Horizon
HSPO	Homeland Security Program Office
ICS	Incident Command System
IP	Improvement Plan
MEF	Mission Essential Function
NC	North Carolina
NCEI	National Centers for Environmental Information
NCR	National Capital Region
NOAA	National Oceanic and Atmospheric Administration
NOS	National Ocean Service
PMEF	Primary Mission Essential Function
POC	Point of Contact

APPENDIX D: PARTICIPANT FEEDBACK







Note: The following views, thoughts, and opinions expressed in the text below belongs solely to the author, and not necessarily to the organization, committee, or other exercise participants.

I observed the following strengths during this exercise:

- Discussions were given plenty of time.
- Smaller breakouts helped discussion
- Note-takers took the burden off participants brainstorming.
- The variety of expertise helped gain good discussion of issues we face in Las Vegas.
- We were able to gain good insight on steps that could be taken to make several short-term improvements.
- There was a good mix of input from the various agencies who were represented.
- Conversation stayed on point and facilitated well.
- Individuals from across the different sectors having the opportunity to network and collaborate.
- Build understanding of the role different organizations would play.
- Open and thought provoking questions designed to drive discussion.
- Large buy-in from agencies
- Central location
- Using real life scenarios
- Mix of participants
- Thoughtful and honest discussion
- Realistic scenario
- Opportunities for lengthy discussion
- Agency host and facilitators taking the role of active listeners
- Focus around power grid encouraged more participation
- The opportunity alone for all of us to meet and discuss heat risk together is a huge step in the right direction.
- Great facilitation
- Good discussion prompts/bounds
- Participation from group members
- Discussion during post-modules share outs
- Great mix of attendees
- Adequate number of breaks
- Set-ups/briefings by facilitators prior to each module were engaging
- Facilitation of scenarios
- Range of players involved
- Planning
- Wide variety of experts in various fields
- A lot of familiarity between players
- I liked the breakout sessions with different disciplines represented.
- The facilitators were helpful.
- There was a good mix of disciplines and experiences of the participants.
- Several of the participants in my group were very knowledgeable in their field.
- Southern NV has a pretty good plan and experience in dealing with heat events.

- Loss of power may be an issue, but on a short-term event will not be a problem.
- I liked that you assigned tables – gave participants a change to interact with other disciplines.
- Vast array of participants that were very knowledgeable
- Facilitator guiding the questions
- Clear instructions
- Realistic scenario and this scenario is a good one to tackle because there is the challenge of “lack of hazard ownership”
- Appropriate time allocation for discussion and modules.
- Diverse participation
- Focus on heat threat
- Interest in topic
- Awareness of what is currently being done and what we need to do
- Opportunities to collaborate
- Partner on projects and initiatives
- Review of NOAA resource tools to inform decision makers.
- Collaboration
- Large swath of participants
- Good participation
- Validation of existing
- We can likely handle the event, but it highlights the issues of needing an office, money, and coordination.
- Committed partners who are willing to collaborate and help
- Sharing of ideas and responses was great.
- I learned so much from others on the types of resources available and how the emergency response system works.
- Benefit of multiple perspectives from different organizations, though most are government agencies
- Diverse groups that represented all areas of government emergency responses.
- Great facilitation
- Great list of attendees from multiple sectors
- Very comprehensive situation manual provided ahead of time
- Good discussion/open environment
- There was a good mix of disciplines represented at this exercise. This provided excellent exposure to a variety of experts.
- Open discussions, time management, exercise implementation
- Highly engaged and continuous discussion
- Some willingness to push the envelope and be very creative
- Good organization diversity
- Ample time for quality discussion
- Excellent gender diversity
- Great team discussions and plenty of time to get into the weeds
- Materials were solid
- Participants very good

- Participants were actively engaged in the modules and sought to find real solutions.
- The diversity of careers/professions were also excellent.
- Collaboration between agencies
- Openness to work through the scenario even though two participants noticed that it is an unlikely situation (in regards to losing power in May).
- Situation briefings were great
- Module 3 was the most engaging in our group especially after seeing the climate projections.
- Good time length in discussions!
- Excellent collaborative communication between a diverse mix of experts and fields.
- Very open floor where ideas were welcomed and considered on their merits.

I observed the following areas for improvement during this exercise:

- Some of the breakouts were lacking background diversity.
- Module 1 inject probably should have been better explained (CPC graphic).
- Felt obligated to answer “what would you do” as if they should have known what it was.
- It was difficult at times to understand what we’re trying to achieve today. Maybe it’s nothing particularly actionable, but it made it difficult to contribute constructively.
- Education to youth and to community leadership.
- Reading some public health studies on heat:
 - Mortality
 - Excess in heat waves
 - ICD study
 - Disability adjustments like years (daily) and heat effects
- Sticking to individual/group report-out format (at least initially) at times felt as though we would dive too deeply on a specific topic and not spend enough time explaining another.
- The two types of incidents were simultaneous events, but at times it was difficult to develop response – it may have worked better to focus on one than the other.
- Better definition (or opportunity) to identify short-term vs long-term recovery and resilience planning action items.
- Table facilitators need to have clear guidelines for group discussions and plan developing. It seemed like each group was doing different activities with different formats.
- Focus was put on brainstorming as groups but it was difficult to be heard at the group level.
- Participants (in my group) seemed set in their ways and didn’t want to think of new resources and plans. Many focused on placing blame, promoting their projects, or deciding there was too much to be done.
- Lack of education around heat for participants
 - Not all participants understand risk and impacts at a systematic level
- Limited to non-existent engagement around racial and ethnic origins of people most likely to be impacted by heat
- Limited participation of social and community advocacy organizations

- Inability to focus on the details of policy recommendations to avoid making broad proposals.
- Focus around EDC distracted participants due to inability to make changes to a well-established and oiled machine.
- Inability of facilitators to ensure no single participant had disproportionate speaking times.
- I felt like we needed more participants and participants who were willing/able to participate both days.
- Lack of supplies to facilitate – small groups were provided markers, easels, easel pads.
- Printed copies of materials for participants would have been helpful.
- Policy maker participation
- Condense to one day
- A little larger room
- I felt the scenario was good, but difficult to look at from an emergency standpoint.
- Electric grid resilience
- Urban greening
- Southern NV needs to lean forward on enforcing mitigation solutions to prevent further problems
- Need more trees and shade opportunities.
- Due to everyone's expertise, a lot of acronyms were used. MACC? EOC?
- It would probably be better for folks to get here later on the first day versus second day to give more time to find location.
- Discussion of existing plans that impact heat threat
- Multi-jurisdiction hazard mitigation plan
- All in climate sustainability plan goals
- Current work being done by participant attendees
- Shorten TTX into 1 day
- Further development of a heat strategy
- Challenges trying to understand the outcome of the exercise. Who is taking final actions or was it a beginning to a discussion to be followed-up on?
- Needed decision makers and managers to hear
- Make the temps higher as many people in S. NV are accustomed to these temps. Even with loss of power, unless it lasts more than 4 hours, most people will not be severely affected. Higher temps are likely at some point and would raise the stakes for more than just the most vulnerable – seniors, homeless, disabled, unwell, etc.
- Some other affected organizations could have been engaged, like parks and recreation, community centers, resorts association.
- The second day prioritization had little to do with the first day's activity.
- Incorporate decision makers/politicians and have more non-governmental organizations. Decision makers need to hear the discussion/concerns raised during deliberations. Non-governmental organizations/non-profits/community groups could offer additional perspectives.
- Could have attendees leave with call-to-actions (i.e., partnerships between attendees/workgroups, action plans, information/resources to move the needle).
- Maybe have policy makers (state/local) part of his workshop/conversations.

- I felt the exercise portion could have been done in one day. Perhaps, devote the first day to training and information, and the second day to the exercise.
- Could have used a better understanding of roles of all participants/orgs
- Clarification of the goals/objectives for actions (or discussion thereof) might have been interesting.
- Limited (apparent) racial/ethnic diversity
- Discussion of who was impacted during event and relative risks between groups was underdeveloped (but also would have been known in advance).
- Need better mixing of participant roles (some groups were heavy EM).
- To improve realism and enhance participation of energy utilities, maybe make the power outage a cyber-attack instead of heat-caused.
- Room – too small for number of people
 - Too big for speakers – needed microphone
- Clarification between heat mitigation and heat management and exercise
- NV Energy said the scenarios w/ blackouts and power loss was unrealistic for this time of year. Late fall would have been more plausible. Terror attack or cyber would have been a possibility.
- Some slides were a bit too heavy on text. Some images to demonstrate impacts would have been nice.
- Really checking breakout groups and making sure good combination of long-term vs emergency planners in each group.
- Few sectors missing – airport, tribal engagement, etc.
- No elected officials
- Did have people leave early – so making more apparent that people should stay for the full length.
- Was difficult to organize the discussion and to focus on addressing the specific questions at hand. Solutions in this group were a little vague and light on logistical considerations.

What specific training opportunities helped you (or could have helped you) prepare for this exercise? Please provide specific course names if possible.

- Long term outlook on extreme heat in our region would have been helpful to know prior to exercise.
- Policy development of how to communicate and inform the public as well as establish operational collaboration between agencies.
- It would have been better to receive the situation in annual ahead of time. I have only taken one ICS course.
- Anything that provides base information on green initiatives or the true impact of heat.
 - Having basic information or identify realities of what is being instituted in the community would help streamline or inform brainstorming and planning. For example, cooling stations are locations that are already open and are not opened in addition to locations.
- Master in city planning degree (helped prepare)
- Southern Nevada Heat Vulnerability Analysis plan by the RTC

- HSEEP
- MEEP
- HSEEP course is great for getting familiar with exercise planning and evaluation
- More broad introductions to urban planning and emergency management
- Would like to know what programs NV Energy currently offers. We hear a lot of programs that are or may be offered and would like better knowledge.
- School of Public Health, UNLV
- Environmental Justice class, Dr. Amanda Morgan; Air Quality, Dr. Anthony Chen
- It would be useful to have a flowchart for emergency management process and communication.
- Is this scenario focus clear that the promoter is responsible for planning for these scenarios? I didn't know that.
- FEMA ICS 100, 200, 300, 400
- Homeland Security Exercise and Evaluation Program – exercise design
- Facilitators
- Ideas for hazard mitigation projects/programs
- Whole tabletop in general
- Clark County All-In Sustainability meetings helped prepare me for this workshop
- Just general experience
- Basic levels/capacities of emergency response (roles of feds, state, local jurisdictions)
- Emergency training – CERT
- Utility-specific training would have been helpful. I had to defer to other in my group when discussing details about power outages.
- FEMA ICS management structure
- Reading local hazard mitigation plans and other relevant plans.
- Facilitation training
- FEMA Hazard Response 101 (MACC, emergency support functions)
- ICS training courses – better sense of response
- Climate change training
- Coming from NOAA, having an understanding of the climate projects, CPC outlook

Which exercise materials were most useful? Please identify any additional materials or resources that would have been useful

- I honestly didn't see the email with the materials until the day of. I was added late I think.
- Resource presented here were fine though.
- I found the slide providing the projection of heat events increase in the next 10-20-30-40 years really helpful to understand heat impacts.
- Also, in the discussions, we talked about the greater risk of the low temperature period high that created even greater impacts than just high temperature during the day.

- Sit Manual
- The powerpoint presentations were helpful.
- Our facilitators and note-takers did an excellent job capturing the group's thoughts.
- Chart to fill out action items rather than a notepad. (needed)
- The materials were helpful. I think that outlines or structure of conversation would be helpful.
- Briefings were thorough and helpful
- Note-taking and active listening skills from organizers/facilitators
- Group discussions were focused
- The scenario packet was well thought out and great for reference
- Printed copies of select materials for attendees
- Visuals/powerpoints
- The situation manual was good.
- I would have liked a map of areas impacted by power loss to see what infrastructure and shelter location would be impacted and what was still available.
- Situation manual
- Primer on standard NOAA notices and reports
- I appreciate the Sit Man in advance to get a better understanding of the scenarios.
- Urban heat resilience star (never seen before)
- List of providers for those that need assistance
 - Ex: who to call if need money to fix AC unit or pay for energy costs, etc.
- Having facilitators guide the conversation to get us back on track
- Table facilitator was very helpful to keep participants focused and on track
- Ex Plan (sit man)
- Mitigation/Management image
- Written materials
- Poster paper to record thoughts and ideas
- The Sun Diagram was helpful
- Some of the graphics from the manual are good, otherwise, it wasn't used very much.
- Breakout questions and facilitators
- Situation Manual
- Urban heat resilience (mitigation/management) diagram
- Also, we could review case studies from other communities with similar issues (i.e., heat in Phoenix, AZ) and see what they've done to mitigate/manage risks to these situations/outcomes...and how we can adopt similar models in our jurisdictions (discuss unique challenges/conflicts in our community).
- Powerpoint was useful and kept everything on track.
- Use of current extreme heat management and mitigation
- Sun diagram

- Climate projections chart
- Name tags really helped!
- Situation manual
- Chart paper and markers for brainstorming
- Coffee and light snacks might be helpful
- Presentation of exercise to roll through the scenario
- Module 3 powerpoint with climate projections – seemed to help participants understand severity ahead
- Great job explaining the CPC outlook information and great materials when explaining the scenario.
- The prompt questions really were the bedrock of the discussion. Many of the detailed scenario slides were not included in group work and in some cases, group members were not sure which aspects of the scenario to work on. For example, one member thought we were just assessing the scenario for the EDC and not the whole region.

Please provide any recommendations on how this exercise or future exercises could be improved or enhanced.

- Inclusion of AFN or other vulnerabilities to brainstorm solutions.
- Inclusion of policymakers
- Including some more diversity of background in the formation of the exercise.
- Give us real examples of heat related events and impacts.
- What was the cost of not being prepared, who was responsible for coordination failures, what were the after action findings?
- Greater emphasis on policy making to mitigate long term impacts could have been discussed more.
- Focus on single events rather than two (seemingly separate) events.
- The scenario provided made it difficult to focus on a targeted approach in the response phase (as well as future planning events).
- Round robin introductions to get a better understanding of who is in the room was just table by table.
- Putting action items out and have the group decide on discussion and potentially dot voting to capture everyone's thoughts.
- Smaller groups with participants focused on more intensive plans using real data.
- More space, larger tables
- More structure
- Bringing data to inform
- It could be difficult to be heard
- Integrate more players and community members
- Incorporate environmental justice planning recommendations
 - See FHWA and other federal guidelines

- I think more attendance would be helpful, but that's not on NOAA!
- I think the EDC aspect of the scenario detracted a bit from the main focus of the exercise.
- Slightly bigger room for number of participants.
- Larger space. The room was a bit small for so many people talking at the same time.
- Review of a real-world example of events similar to the exercise.
- Thank you for choosing Las Vegas as one of your choice cities and I look forward to implementing the ideas/bringing the ideas back to my agency.
- Organization tree for agencies and what they do (1-2 sentences)
- Perhaps do a survey in a month to see if anyone made changes to their event process/permit to specifically address this type of situation.
- Apply scenario to work currently being done to make action items more relevant
- Encourage use of additional graphics like the heat sun
- Some elected official participation
- Need more energy staff
- Very difficult to complete discussions in groups with multiple conversations – frustrating to not be heard.
- Additional perspectives from non-profits who provide services for underrepresented or underserved populations.
- Really well done/organized – thank you!
- Either make the exercise the second day and training on the first, or just have this be a one-day event.
- Maps
- Table tents/name cards
- Developing pathways to implementation
- Maybe shuffle groups once to increase networking?
- Rotating groups to get more diversity of ideas and provide networking opportunities
- Break modules out to make more digestible – module 2 was especially heavy
- If there were a way to network/meet the other participants that were not in our group – maybe organizing a happy hour after day 1 or switching tables.
- It would probably help to have more experienced facilitators. Everyone did great, and did their best, but the exercise may benefit from facilitators who can steer the conversation more expertly and actively.