



**STATE OF NEVADA  
MEETING MINUTES  
NEVADA HAZARD MITIGATION WORKING GROUP**

<b>Attendance</b>	<b>DATE</b>	July 10, 2023
	<b>TIME</b>	1:00 p.m.
	<b>METHOD</b>	Zoom
	<b>RECORDER</b>	Lisa Miller-Hobbs

Appointed Voting Member Attendance					
Member Name	Present	Member Name	Present	Member Name	Present
Eric Antle	X	Faith Beekman	X	Ceira Sampson	X
Andrew Trelease – Vice Chair	X	Kathy Canfield	X	Erin Warnock	X
Stephen Aichroth	X	Shari A. Davis	X	Vacant	
Solome Barton	X	Craig dePolo	X	Melissa Whipple	X

Legal/Administrative Staff		
Name	Agency	Present
Samantha Ladich – Senior Deputy Attorney General (DAG)	Attorney General's Office –	X
Janell Woodward – Non-Voting Member	NV Division of Emergency Management / Homeland Security (DEM/HS)	X
Lisa Miller-Hobbs	Recorder	X
Sherrean Whipple	Supervising Recorder	X
Jon Bakkedahl – Chair (Non-Voting)	NV Division of Emergency Management/ Homeland Security (DEM/HS)	X

**1. CALL TO ORDER AND ROLL CALL**

Chair Jon Bakkedahl, NV Division of Emergency Management/Homeland Security (DEM/HS) called the meeting to order at 1:00 p.m. Roll call was performed by Lisa Miller-Hobbs, Nevada Division of Emergency Management/Homeland Security (DEM/HS). Quorum was established for the meeting.

**2. PUBLIC COMMENT**

Chair Jon Bakkedahl opened the first period of public comment for discussion. There were no public comments.

**3. APPOINTMENT OF CHAIR FOR THE NEVADA HAZARD MITIGATION WORKING GROUP**

New Chair Jon Bakkedahl, Nevada Division of Emergency Management/Homeland Security (DEM/HS), Deputy Administrator was appointed by David Fogerson, DEM/HS, Administrator/Chief on May 1, 2023. This appointment will serve as a non-voting member of the Working Group.

**4. APPROVAL OF MINUTES**

Chair Jon Bakkedahl requested a motion to accept the minutes from April 5, 2023. Andrew Trelease moved to approve the minutes. Solome Barton seconded the motion. The motion carried unanimously.

**5. WISE OAK CONSULTING L.L.C. – PRESENTATION OF UPDATING THE STATE HAZARD MITIGATION PLAN (SHMP)**

Randy Brawley, Wise Oak Consulting, discussed the updates to the State Hazard Mitigation Plan. Mr. Brawley discussed the different hazards included, focusing on the updates made to existing hazards and the new ones that have been added, as well as to some of the changes to the hazard locations within the SHMP itself.

Mr. Brawley discussed the major changes, beginning with climate change. Mr. Brawley indicated that since 2019, FEMA has had a whole new set of tools and GIS-based models that have been included in the mapping. Mr. Brawley indicated that as the revision process has moved forward with the State Hazard Mitigation Plan, it has been done with the focus of bringing it more in line with the THIRA and the State of Nevada Threats and Hazards Guide. Mr. Brawley explained that the community information has been increased via extensive national-risk index maps, along with completely new hazardous runs on the major rivers, as well as on Mount Rose, Frenchman fault, and Mount Ruby USGS scenarios.

Mr. Brawley next discussed the updated prioritization on Section 3, which was based on online poll results, as well as the action items that were prioritized in Section 4, again according to poll results. Mr. Brawley discussed the impact of climate change, indicating that FEMA's one comment was that there was not enough analysis with respect to climate change, in particular quantitative analysis. Mr. Brawley indicated that there was a focus on the five major areas of disaster in the state climate strategy flood; heat; heat waves; loss of snow; wildfire. Mr. Brawley further indicated that over the past several years, heat, heatwaves, and drought have become even more significant than in the past. Mr. Brawley explained that while general climate trends are well understood, the quantitative impact of this is much more difficult to unpack.

Janell Woodward asked if the value for death was used for any of this.

Randy Brawley indicated his belief that FEMA's work with the national risk index addresses that in their methodology.

Chair Jon Bakkedahl indicated that this was a comment to the fact that ultimately with all of the things that were listed, there is death and as such, the risk-point analysis usually has some sort of a final endpoint being death in the worst-case scenario.

Randy Brawley next discussed the integration with the state THIRA and the three workshops held in Northern Nevada, Eastern Nevada, and Southern Nevada and the different threats and hazards each of those locations identified. Threats in the north included: Mount Rose earthquake; flood; pandemic; festival severe weather; wildfire; rail tanker accidents; active shooter; and cyber attacks, including ransomware and attacks on the power grid. Threats in the east included: drought; earthquake; flood; pandemic; severe weather including winds, thunderstorms, and hail; severe weather including snowstorms and wildfire; rail and tanker accidents; Carlin Tunnel hazmat accidents; mining accidents; active shooter, and cyber attack. Threats in southern Nevada included: drought; Frenchman fault earthquake; flood; pandemic; wildfire; hazmat release; utility interruption; extreme heat events; mass casualty attacks; cyber attacks; tunnel poisoning attacks; and pipeline attacks.

Andrew Trelease asked why extreme heat was not included as a hazard for southern Nevada.

Randy Brawley explained that people vote on what they believe to be the big threats and noted that his scenarios are always in extreme heat.

Chair Jon Bakkedahl explained that the focus tends to be on the five things that would be a dramatic impact in the natural hazards but noted his willingness to add extreme heat to the southern Nevada impacts.

Randy Brawley reiterated that integration with the THIRA does include some sensitive things, such as cyber attacks and tunnel poison and gas attacks, and will not include a lot of information as they are high-level concerns. Mr. Brawley reminded the group that across the different planning elements, these things will ultimately be aligned. Mr. Brawley next indicated that although the THIRA executive summary was included as an appendix in the past, due to increased sensitivities, this has been removed and replaced with the directive to contact DEM. Mr. Brawley explained that in integration with the state threat and hazards guide, all the hazards were renamed to account for previous discrepancies. In addition, Mr. Brawley indicated that Section 3 has been reorganized according to that guide. Mr. Brawley further noted that for purposes of alignment, technological hazards was broken down as its own Chapter 3 subsection along with things like natural hazards, dam failures, and human cause threats. Mr. Brawley informed the group that in the major reworking of Section 3, there are now models for all the hazards as well as a social vulnerability index, including maps to enable people to look within their own communities. Mr. Brawley explained that there are different social vulnerability indices for people with disabilities.

Mr. Brawley next discussed earthquakes and the extensive risk assessment done by the Nevada Bureau of Mines and Geology approximately a decade earlier. Although this was beyond scope and time for this project, Mr. Brawley explained, USGS shake-map scenarios for Mount Rose, Frenchman fault, and Ruby Mountain were included. Mr. Brawley indicated that hazardous runs were run for these.

Janell Woodward indicated that Solome Barton had pointed out that North Las Vegas was not listed as a city under Clark County in the earthquake and economic loss tables, and questioned why this might be.

Randy Brawley indicated that he will need to defer to Bureau of Mines and Geology as they performed the original, detailed study and explained that he will see if he can locate some more details regarding this for the group.

Solome Barton pointed out that North Las Vegas has two fault lines running under it and as such, it would be remiss to omit it from the earthquake data.

Craig DePolo indicated that the hazardous run could likely be easily done for North Las Vegas, but the USGS program used in the past for probabilities no longer exists.

Randy Brawley next discussed the respondents to the surveys, indicating that there were many demographics included and not just emergency managers. Mr. Brawley indicated that about two-thirds of the survey respondents work with people with access and functional needs, and that 22 percent of the respondents themselves identified as having an access and functional need. Mr. Brawley next discussed the weighted averages and the 1 to 5 scoring model on the various factors used in the survey, including: probability/frequency; magnitude and severity; warning time; and duration. Mr. Brawley explained that extreme heat, which in the last hazard mitigation plan had been a medium concern, has now risen to become the number 2 concern, right after wildfire. Mr. Brawley pointed out that infectious diseases did not rate as a high priority, which surprised him given the recent recovery from the COVID-19 pandemic.

Andrew Trelease discussed the damage due to straight line winds in southern Nevada, noting that he would have believed that these would rank about thunderstorms and lightning.

Randy Brawley explained that hazmat was noted as the number 1 technological hazard in the Hazard Mitigation Plan, then listed the other hazards noted.

Andrew Trelease asked about the reason behind flash floods being included in technological.

Randy Brawley explained that this is because it is human-related, citing irrigation ditches that are flooding versus a river.

Andrew Trelease indicated that this was not actually flash flooding.

Randy Brawley indicated that he would pull up the survey itself to review what exactly was said and why this was listed there, and come back to the group with the findings.

Randy Brawley next discussed human cause hazard prioritization, noting that wildfire, extreme heat, floods, and drought risk were moved up to high priority this year. Mr. Brawley explained

that although respondents deemed pandemic a medium risk, the consulting firm opted to retain it as a high risk given the recent COVID-19 pandemic.

Kathy Canfield indicated her belief that the determination of what is high-risk comes from who is responding, noting that all the fire personnel deemed wildfire the biggest threat, whereas if hospital workers had been the respondents, infectious disease may have been deemed the highest risk. As such, Ms. Canfield noted the importance of this group analyzing these risks based on the respondents. In addition, Ms. Canfield reminded the group of how political the pandemic became, thus creating discrepancy in society over the risk of infectious diseases, noting that this may be a difficult thing to overcome.

Chair Jon Bakkedahl concurred, adding that the people who attend the meetings tend to be those that are the most vocal and get the most input, and noted that many of the emergency managers are either current or former members of fire organization and therefore, their opinions weigh heavily. In addition, Chair Bakkedahl noted that the state and federal government is throwing a large amount of money at the wildlands. Chair Bakkedahl indicated that during COVID, nearly all THIRA information came back about infectious disease, particularly during the first two years, before normalizing back to where Nevada tends to roll. Chair Bakkedahl commended the ranking system provided by Mr. Brawley.

Craig DePolo indicated his personal belief that he does not necessarily have a good understanding, history, or perspective about many of the things in the THIRA and as such, reiterated an earlier discussion by the Committee to get a group together to listen to experts, answer questions, and thus allow for an informed response for collective ranking.

Chair Jon Bakkedahl encouraged everyone in the group to attend the three workshops in September, noting that there is a virtual option for those unable to do all three days. Chair Bakkedahl indicated that the first day will be the THIRA and encouraged members to attend and be a part of that process, which also includes tabletop exercises. Chair Bakkedahl discussed how the state's abilities on certain scenarios plays into the scoring, noting that the things that always require the help of FEMA tend to score higher than those in which the state abilities are very strong.

Eric Antle noted his lack of surprise that wildfire was the number 1 hazard, but discussed how adjoining hazards listed may run concurrent with a wildfire, exacerbating that hazard, citing the example of a wildfire in an extreme heat index, in a drought, that aligns with a storm could potentially present as a significantly more hazardous situation than, perhaps, a pandemic, which could be isolated to a certain geographical location and may have more opportunities for resources to keep it isolated.

Kathy Canfield raised the issue of air quality issues and questioned if this is something that would fall under wildfires or under its own separate category.

Randy Brawley responded that this was one of the factors that came up in several of the climate-change risks discussed and opined that this would be an interesting factor to consider as a primary.

Andrew Trelease asked for verification that risk includes probability, and if so, this may weigh into why forest fires rank higher than earthquakes or pandemics, given that forest fires are a consistent occurrence in the state.

Randy Brawley confirmed that probability, magnitude, warning time, and duration are included in the risk. Mr. Brawley added to Chair Bakkedahl's comments regarding the THIRA, noting that when he worked for FEMA Region IX, the regional administrator did get a percentage to weigh particular risks higher than others. Mr. Brawley noted that this did not necessarily move those particular concerns to the top, but did weigh them higher. As such, Mr. Brawley noted that this group could collectively weight particular concerns higher.

Randy Brawley next discussed the charts added for each potential hazard, noting that they include things like the national risk index score and expected annual loss. Mr. Brawley further noted, in response to Mr. Trelease's earlier question, that flash floods were listed along irrigation ditches and canals versus the broader floods.

Andrew Trelease noted his belief that this is incorrect, indicating that flooding along canals and ditches is different from flash flooding.

Randy Brawley indicated that he will clean this up and will go back to the Hazard Mitigation Plan with it to see how it has been defined, at which point, Mr. Brawley will reach out to the subject matter expert who did the ditches and canals to see what can potentially be cleaned up in that section.

Craig DePolo noted that in some places, like in Reno, the ditches are a significant hazard because they're flooding right into the town versus other places where it could be more agricultural or lower risk.

Randy Brawley concurred, and noted that he was unable to get the data to remap that.

Andrew Trelease raised the example of the canal failure at Fernley, which had nothing to do with a storm and was not related to flash flooding.

Chair Jon Bakkedahl indicated his support of this conversation, and cited other examples of technological problems causing flooding, such as the drainage system coming out of River Reservoir off of the tribal land from the Walker River with a failing spillway and ruptured canals due to the increased water impacts. Chair Bakkedahl concurred with Mr. Trelease's comments, and suggested rewording flash floods to instead be levees, canals, spillways, or something to that effect, noting that Ms. Woodward had explained that dams need to be kept failure-specific due to the high hazard dam risk grant.

Randy Brawley agreed that he would revisit this section and do some clean up of the language. Mr. Brawley next discussed the updates on Section 4, thanking the group for the spreadsheets they provided to make this possible. Mr. Brawley discussed the scoring categories used for this section: social; technological; administrative; political; legal; economic; and environmental. Mr. Brawley indicated that all of these were combined, scored, and ranked out as follows: the top 25 percent were listed as high-risk; the next 25 percent were listed as medium-risk; and the bottom 50 percent were categorized as low-risk. Mr. Brawley noted that the state had, within the past few years, added extreme heat and drought, which had not been included in the 2018 version. Mr. Brawley informed the group that this plan has been posted for approximately three weeks now for public comment, during which the FEMA Hazard Mitigation Plan Review is being completed. Mr. Brawley indicated that today's comments will be brought back and included, and then a final editorial review will be submitted to FEMA by the 1st of August, after which two things occur: FEMA approves it, and then the state adopts it. Mr. Brawley noted that prior to state adoption, the plan will be updated with FEMA's suggestions.

Janell Woodward indicated her desire to submit to FEMA as soon as possible in order to fix FEMA's suggestions. Ms. Woodward explained that she is currently working on the two appendices that have the completed mitigation actions, as well as the state's public outreach, and encouraged members to send her anything they have done that they feel could be included. Ms. Woodward further encouraged members to reach out to her as soon as possible regarding any issues they've found, such as Ms. Barton's indication of the omission of North Las Vegas. Ms. Woodward informed the group that FEMA has a lot of requirements this year with the new guidance that has come out, and so the state is working hard to ensure that all of this is addressed. Ms. Woodward indicated that she has been addressing building codes, as this has been an issue for many years because the state handles them differently than FEMA does. Ms. Woodward explained that FEMA wants statewide building codes for competitive BRIC grants, but Nevada believes that it would be useful for FEMA to perhaps change their viewpoint on this and put the adoption at the local level so as not to punish the entire state for areas that have not adopted any codes. Ms. Woodward also noted that the plan update has not been heavily done as a committee simply in the interest of time as there has been less time this year to get this done than in years past. Ms. Woodward concluded by expressing her appreciation of each member of this committee and reminded members to submit comments directly to her by the 21st of July in order to incorporate them in the final submission to FEMA.

Chair Jon Bakkedahl asked for any additional comments, questions, or concerns about where the state is in the current planning process, or for any additional major changes that the members see due to the routine revision of the plan.

Janell Woodward indicating that extreme heat and winter storm would need to be added to goals and mitigation actions based on today's discussion, and that they need to be added should the state wish to apply for a grant. As such, Ms. Woodward welcomed input for projects in these areas.

Kathy Canfield discussed the addition of air quality and smoke, whether under wildfire or another topic.

Solome Barton concurred with both Ms. Canfield and Ms. Woodward, and noted that dust storms, although not necessarily common, can be extensive and should be included along with air quality.

Chair Jon Bakkedahl concurred and encouraged members to submit the information to Ms. Woodward in order to incorporate these suggestions.

Janell Woodward questioned where the best place would be to tie in air quality and dust storms under the existing hazards, and suggested extreme heat and winter hazards might be the best location.

Solome Barton questioned the possibility of adding these as a subsection under severe weather so as to capture all of them.

Janell Woodward concurred.

Randy Brawley provided the group with an example of the analysis created for climate change and the inclusion of things like public health, water, resources, environment, recreation, hospitality, and agriculture. Mr. Brawley noted that under public health, mortality is included. Mr. Brawley further indicated that the earthquake study referred to earlier in his presentation stated that some communities were not explicitly listed in the tabulations because the effects of earthquakes near those cities and towns are included in the effects of nearby communities, noting that losses in North Las Vegas are included in the scenarios for Las Vegas, Henderson, and Boulder City.

Craig DePolo explained that a hazardous scenario can still be run to include the Eglington fault.

Solome Barton expressed her appreciation for this suggestion.

Chair Jon Bakkedahl called for any further discussion before asking for a motion to accept the rankings of hazard as presented.

Andrew Trelease moved to accept rankings of hazards as presented by Wise Oak Consulting. Craig dePolo seconded the motion. Motion carried unanimously.

## **6. Public Comment**

Chair Jon Bakkedahl opened the second period of public comment.

There were no public comments.



## **7. Adjournment**

Chair Jon Bakkedahl asked for a motion to adjourn. Andrew Trelease moved to adjourn the July 10, 2023 Nevada Hazard Mitigation Working Group meeting. Solome Barton seconded the motion. The motion carried unanimously.