





Preparation for Open Comment Review Period

CLARK COUNTY, NV

MJHMP STEERING COMMITTEE/COMMUNITY MEETING

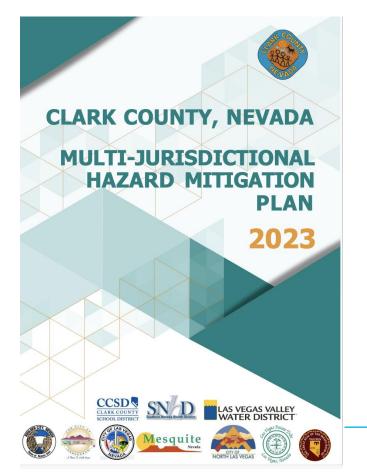
April 26, 2023

Introductions and Meeting Reminders









Open Comment Period









Why We Mitigate?

Financial Assistance for Mitigation Projects: Hazard Mitigation Plans can be used to apply for grants to help fund various hazard relief projects.

The financial assistance grants that can be used for mitigation projects are as follows:

- Hazard Mitigation Grant Program (HMGP)
- Building Resilient Infrastructure and Communities (BRIC)
- Flood Mitigation Assistance Plan (FMA)







Why We Mitigate?

Clark County, NV Storm Data from NOAA Storm Database

- Date: January 1, 2018, to December 31, 2022
 - Events
 - 473 events reported with 18 different event types
 - 239 total days affected by the events
 - Seven (7) counties were affected by these events, including Clark County
 - Property Damage totaling \$6.554 Million
 - Injuries/Deaths: 12 Injured/132 Deaths





Clark County MJHMP Sections

Section

• Hazard Mitigation Program and Requirements

Section

• Introduction, Planning Process, and Plan Maintenance Procedures

Section

• Planning Area Description and Hazard Analysis and Risk Assessment

Section

Mitigation Strategy

Section

• Plan Approval and Adoption





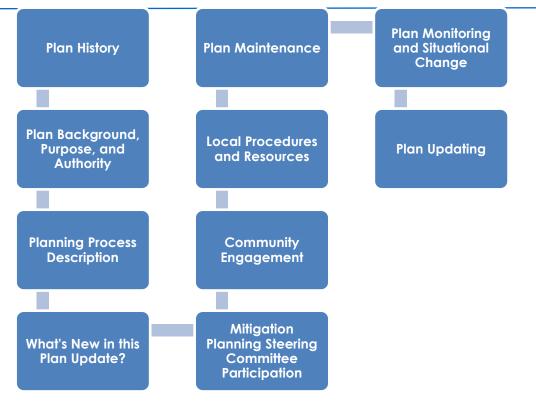
Section 1: Hazard Mitigation Program and Requirements

- Includes background on hazard mitigation planning
- Lists the Hazard Mitigation Planning requirements
- Provides a description of the plan
- Discusses the grants related to Hazard Mitigation





Section 2: Introduction, Planning Process and Plan Maintenance Procedures







Plan Development

Clark County committed to drafting a functional, comprehensive, and inclusive update to the current multi-jurisdictional mitigation plan (2018).

As documented within the plan update, Clark County and each participating jurisdiction actively participated in the planning process from its inception.

- Mitigation Planning Steering Committee members actively participated in meetings, solicited input from community members, and ensured that all jurisdictions' information was reflected in the plan.
- A brief description of the planning process and Steering Committee activities, including a list of all meetings and their purpose, and a complete list of planning team participation is in Section 2 – Mitigation Planning Steering Committee Role of the plan update.



Clark County Participating Jurisdictions

County

Clark County, including the Unincorporated Portion of the County



Special Districts

- Clark County School District
- Clark County Water Reclamation District



Southern Nevada Health District





AS VEGAS VALLEY



Cities

- **Boulder City**
- Henderson
- Las Vegas
- Mesquite
- North Las Vegas



CITY OF NORTH LAS VEGAS





Tribes

- Las Vegas Paiute
 - Moapa Band of Paiutes







Plan Development: Plan Drafting Stage

In March 2022, the planning process for the 2023 HMP began. Select staff from participating jurisdictions and stakeholders were invited to participate on the Steering Committee for the purpose of developing the 2023 HMP, in addition to representation from Nevada Division of Emergency Management.

Seven (7) events were held throughout the planning process with the Steering Committee and representation from each of the plan's participating jurisdictions to discuss the status of the plan update development process including:

- April 18, 2022- Kickoff Meeting
- May 9, 2022- Steering Committee Meeting
- May 24, 2022- Steering Committee Meeting
- August 16, 2022- Steering Committee Meeting
- November 29, 2022- Hazard Mitigation Technical Assistance, Steering Committee Meeting
- February 15, 2023- Steering Committee Meeting
- April 26, 2023- Hazard Mitigation Open Public Comment Community Meeting, Steering Committee Meeting





Two HMP Surveys were used to collect information from the planning team, agencies, stakeholders, and the public.

- Clark County Hazard Mitigation Survey
- Clark County Open Comment Survey







Clark County
Multi-Jurisdictional Hazard Mitigation Plan Update
Community Survey Data Analysis



Clark County Multi-Jurisdictional Hazard Mitigation Plan Survey

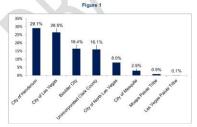
To allors the update of the Clark County Multi-Jurisdictional Hazard Mitigation Plan (M.H.H.P), the county concluded an online survey measuring resident level of concens for victions hazards, and the community's general level of preparedness. The online survey was conducted from July 11, 2022, through September 1, 2022, 803 Clark County residents repidied to the survey, with a completion rate of 100%. This means that every person who accessed the survey submitted a completed form. On average, individuals filling out the survey sport approximately five minutes catifing answers.

The Clark County MJ-IMP Community Survey asked 11 questions, both quantitative and qualitative. Each question asked respondents to detail their perspectives on the hazards that present themselves to their community. The hazards listed were based off of the hazard list from the 2018 Clark County MJ-IMP. Additional hazards added to the updated 2029 Jan were not included in the survey.

Below are quantitative breakdowns for each question

Question 1: Select the option that best describes where you live.

Of the 803 survey respondents, 29% (234 participants) were from the City of Henderson. 27% (213 participants) were residents of Las Vegas, and 16% (132 participants) were residents of Boulder City.



Clark County

Multi-Jurisdictional Hazard Mitigation Plan Update

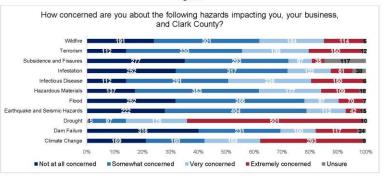
Community Survey Data Analysis



Question 2: Clark County residents and businesses may encounter a variety of hazards and/or disasters. How concerned are you about the following hazards impacting you, your business and Clark County? 1 (Not at all concerned), 2 (Somewhat concerned), or 4 (Extremely concerned)

Overall, respondents recognized drought (62%), climate change (36%), and infectious disease (18%) as hazards of extreme concern. Respondents were the least concerned about dam failure (40%), flood (31%), and earthquake and seismic hazards (27%).

Figure 2





CONSTANT

Multi-Jurisdictional Hazard Mitigation Plan Update Community Survey Data Analysis



Question 3: Which of the following steps has your household taken to prepare for hazardous

Respondents were asked to indicate which actions their households have taken to prepare for hazardous events. These questions allow the county to recognize common strengths in preparedness among household jurisdictions and identify gaps they may need to address and add to response efforts during emergency response

There were 16 options for respondents to choose from ranging from steps taken by the household to preparing a disaster supply kit. The full list of categories can be seen in the corresponding table:





Out of the 803 respondents in total to the survey, two skipped this question for a total of 803 responses. The most common steps taken by households in the county included:

- . Installed smoke and carbon monoxide detectors on each floor of your house 605 respondents
- . Have working portable fire extinguishers in appropriate areas of the home 494 respondents
- · Stored a battery powered radio, flashlights, and extra batteries 482 respondents

The least commonly taken actions included:

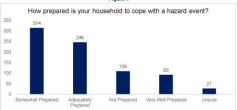
- · None 30 respondents
- Purchased earthquake insurance 50 respondents
- Purchased flood insurance 51 respondents

In addition to these actions, 400 respondents indicated that they had attended a first aid/CPR training and 88 indicated they had taken a local Community Emergency Response Team (CERT) class. This indicates that there is a large audience for community preparedness trainings in the county.

Clark County
Multi-Jurisdictional Hazard Mitigation Plan Update Community Survey Data Analysis

Question 4: How prepared is your household to cope with a hazard event?

Respondents were asked to rate their preparedness for their household if confronted with a hazardous event. They were asked to select one answer rating their current preparedness, ranging from very well prepared, adequately prepared, somewhat prepared, or not prepared at all, and unsure. Of the 803 respondents to the survey, 15 skipped this question for a total of 788 responses.



Overall, 314 respondents (40%) stated that they felt somewhat prepared to cope with a hazard event. 246 respondents (31%) stated they were adequately responded, which is the second to last level of preparedness. This may indicate that more training and resources regarding household preparedness may be needed to bring residents to satisfactory levels of preparedness. Only 92 respondents (11%) stated they were very well prepared, and 27 respondents (3%) said they were unsure.

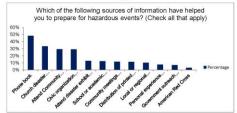
Multi-Jurisdictional Hazard Mitigation Plan Update Community Survey Data Analysis



Question 5: Which of the following sources of information have helped you to prepare for hazardous events? (Check all that apply)

This question assists the county and each participating jurisdiction in identifying strengths in community engagement as well as identifying gaps in increasing whole community preparedness and education surrounding hazardous events.

Figure 5



From the 656 respondents that answered this question, 316 respondents (48%) stated that they gathered information to prepare for hazardous events from personal experience with hazardous events. This category was followed by 220 respondents (33%) who stated they received their information from local or regional media sources.

193 respondents (29%) identified government outreach for emergency preparedness such as federal, state, or local websites and social media as their primary source of information for preparation. This was the third most popular selection choice, which indicates there may be increased engagement with county residents from local government sources such as websites and social media.





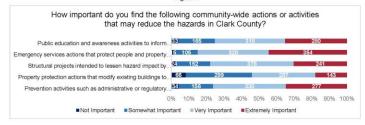
Clark County Multi-Jurisdictional Hazard Mitigation Plan Update Community Survey Data Analysis



Question 6: How important do you find the following community-wide actions and activities to increase preparations and reduce the risks of hazards in Clark County?

This question asks respondents to identify the importance of community-wide actions and activities to increase preparedness and reduce the risks of hazards in Clark County, 798 respondents responded to this question.

Figure 6



354 respondents (44%) identified emergency services actions as extremely important. Additionally, 280 respondents (35%) identified public education and awareness activities as extremely important. 277 respondents (34%) identified prevention activities such as administrative or regulatory actions that influence the way land is built or developed as extremely important.

Clark County Multi-Jurisdictional Hazard Mitigation Plan Update Community Survey Data Analysis



needs of their community to recognize areas where access and functional needs may surface during a hazards event response.

Of the 797 respondents to this question, 217 individuals indicated yes, that they do have additional access and functional needs and would be interested in early warning notifications or specialized response to evacuate during disasters.

Question 8: If you answered yes to Question 7, do you have a certified service animal that you would be interested in evacuating with you or a household member to a shelter during a disaster?

Of the respondents that answered Question 7, 53 of respondents indicated that they do have a certified service animal that may evacuate with their household to a shelter during a disaster response.

Question 9: If you answered yes to Question 7, would you be interested in more information about Disaster Assistance for people with disabilities and/or access and functional needs?

Of the respondents that answered Question 7, 165 respondents indicated that they would be interested in more information about Disaster Assistance for people with disabilities and/or access and functional needs.



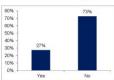


Figure 7

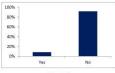
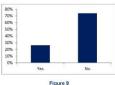


Figure 8



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Documented Resources Used to Draft Plan

The Mitigation Planning Steering Committee with CONSTANT conducted a comprehensive review of the existing Clark County documents that were included in the draft plan update:

- Clark County Critical Facilities List
- Clark County Emergency Operations Plan (EOP)
- Clark County Local Emergency Planning Committee, Hazardous Materials Emergency Response Plan
- Previous Clark County Multi-Jurisdictional Hazard Mitigation Plans
- Clark County Master Plan
- Clark County Sustainability and Climate Action Plan
- Nevada Climate Vulnerability Assessment
- Clark County Regional Flood Control District Master CIP Plan
- Colorado River Drought Contingency Plan
- State of Nevada Enhanced Mitigation Plan





Continued Public Involvement

Clark County is dedicated to involving the public in continual shaping of the plan and the development of its mitigation projects and activities.

- Clark County Mitigation Planning Steering Committee will continue to keep the public informed about its mitigation project and activities through the Office of Emergency Management.
- Copies of the Clark County Multi-Jurisdictional Update will be available on the County's website and distributed to the participating jurisdictions





Plan Maintenance Process

Clark County MPSC, with help from CONSTANT Associates, has developed a method to ensuring monitoring, evaluation, and updating the plan.

- <u>Plan Monitoring</u>: Regularly report on the mitigation actions and projects progress from start to finish
- Plan Evaluation: an evaluation report will be written and submitted to provide an assessment of either completed or ongoing activities within the plan.
- Plan Updating: Clark County will begin their update process of the plan (insert number) year from this plan adoption according to the FEMA DMA 2000 guidelines on local mitigation plan updates under the direction of Clark County OEM.







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Section 3&4: Planning Area and Hazard Risk Assessment

Verify Critical Facilities List

Develop Community Profiles

Identify Hazards & Collect Hazard History

Calculate Future Probability

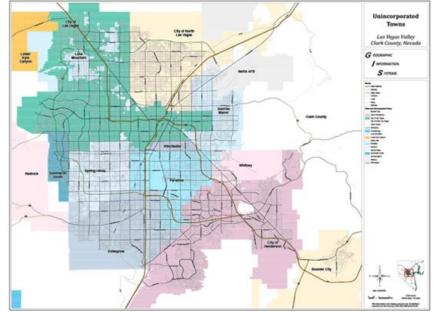
Analyze Land Use & Development Trends





Station Casino Unincorporated Clark County Ballpark Desert Inn Desert Inn Flamingo Sam Boyd Stadium ternational Airport Windmill Henderson Silverado Ranch Horizon Cactus Unincorporated Clark County ion Estimates 2.3 million Via Inspirada nincorporated Areas) 1 million ad Clark County 15.000 318,000 642,000 21,000 263,000

Clark County Planning Area







Clark County Hazards Addressed in Plan

- Climate Change
- Drought
- Earthquake (Geohazards, Earthquake and Seismic Hazards)
- Extreme Heat (Extreme/Excessive Heat)
- Flooding (Flood, Landslide & Debris Flow Flood)
- Fissures & Subsidence
- Severe Weather (including Thunderstorms, Hail, Lightning, Wind, and Tornadoes)
- Wildfire (Fire, Wildland Urban Interface)
- Dam Failure (Infrastructure, Dam Failure)
- Infestation
- Infectious Disease (Infection Disease Emerging Disease with Epidemic or Pandemic Potential and Respiratory Virus with Epidemic and Pandemic Potential
- Hazardous Materials (Chemical, Biological, Radiological, Nuclear & Explosives CBRNE Hazardous Material)
- Terrorism (Terrorism International Terrorism, Domestic Terrorism, and Complex Coordinated Attack)





Hazard Vulnerability & Risk Assessment

Analyzed the jurisdictions:

- Hazards
- History
- Vulnerability

Conducted Final Risk Assessment:

- Where appropriate, use HAZUS-MH to model losses for the following hazards:
 - Earthquake
 - Flooding





Clark County Hazard Risk Summary

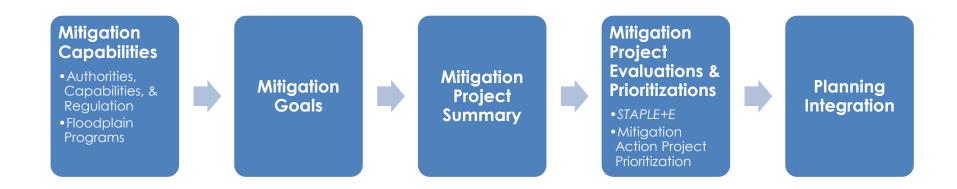
	Hazard Ris	sk Summary - Ma	n-Made Hazard	s	
Jurisdictions	Infrastructure, Dam Failure	Hazardous Materials	Infectious Disease	Infestation	Terrorism
Clark County including Clark County Unincorporated Areas, Las Vegas Paiute Tribe, and Moapa Band of Paiutes	Occasional**	Highly Likely (3400%)	Occasional**	Likely	Highly Likely (83.3%)
City of Boulder City	Occasional**	Highly Likely (3400%)	Occasional**	Likely	Highly Likely (83.3%)
City of Henderson	Occasional**	Highly Likely (3400%)	Occasional**	Likely	Highly Likely (83.3%)
City of Las Vegas	Occasional**	Highly Likely (3400%)	Occasional**	Likely	Highly Likely (83.3%)
City of Mesquite	Occasional**	Highly Likely (3400%)	Occasional**	Likely	Highly Likely (83.3%)
City of North Las Vegas	Occasional**	Highly Likely (3400%)	Occasional**	Likely	Highly Likely (83.3%)
Special District: Clark County School District	Occasional**	Highly Likely (3400%)	Occasional**	Likely	Highly Likely (83.3%)
Special District: Las Vegas Valley Water District/SWNA	Occasional**	Highly Likely (3400%)	Occasional**	Likely	Highly Likely (83.3%)

		Ha	azard Ris	k Summary	r - Natural Ha	azards			
Jurisdictions	Climate Change	Infrastructure, Dam Failure	Infrastructure, Drought Excessive Fissures &		Flood, Landslides & Debris Flow, Flooding	Geohazards- Earthquake and Seismic Hazards	Severe Weather	Fire, Wildland Urban Interface Fire (Wildfire)	
Clark County including Clark County Unincorporated Areas, Las Vegas Paiute Tribe, and Moapa Band of Paiutes	Highly Likely	Occasional**	Likely**	Highly Likely (720%)	Occasional	Highly Likely (760%)	Likely**	Highly Likely****	Highly Likely (58.30%)
City of Boulder City	Highly Likely	Occasional**	Likely**	Highly Likely (720%)	Occasional	Highly Likely (760%)	Likely**	Highly Likely****	Highly Likely (58.30%)
City of Henderson	Highly Likely	Occasional**	Likely**	Highly Likely (720%)	Likely	Highly Likely (760%)	Likely**	Highly Likely****	Highly Likely (58.30%)
City of Las Vegas	Highly Likely	Occasional**	Likely**	Highly Likely (720%)	Likely	Highly Likely (760%)	Likely**	Highly Likely****	Highly Likely (58.30%)
City of Mesquite	Highly Likely	Occasional**	Likely**	Highly Likely (720%)	Occasional	Highly Likely (760%)	Likely**	Highly Likely****	Highly Likely (58.30%)
City of North Las Vegas	Highly Likely	Occasional**	Likely**	Highly Likely (720%)	Likely	Highly Likely (760%)	Likely**	Highly Likely****	Highly Likely (58.30%)





Section 5: Mitigation Strategy







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Section 5: Mitigation Strategy

To support the mitigation goals, the Clark County MPSC and CONSTANT Associates identified a comprehensive range of 92 possible and unique mitigation projects and activities.

 This plan update does include "carryover" projects from Clark County previous MJHMP (2018), as they are still relevant, in progress or ongoing.

References for Mitigation Projects can be found within the plan update:

- Further information on evaluation criteria, please see Mitigation Project Evaluation & Prioritization Section.
- Full list of mitigation projects, their descriptions and prioritization per jurisdiction can be found in Appendix H – Mitigation Project Prioritization.





Clark County Mitigation Project Summary

	Mitigation Projects Summary	
Mitigation Project or Activity	Hazards Addressed	Jurisdiction(s)
Maintain infrastructure, relocate beaver copulation, and remove beaver dams	Coastal Hazard, Inland Flooding	Liberty County
Drainage Systems	Coastal Hazard, Inland Flooding	Liberty County
Flood Plain Regulations	Inland Flooding	City of Allenhurst
Outreach and Promote Acquisition and Elevation of Flood Prone Structures	Inland Flooding	City of Flemington
Education and Outreach	Hurricane Wind, Wind, Tornadoes	All Jurisdictions
Warning Call for Special Populations	All Hazards	All Jurisdictions
Public Outreach	Coastal Hazard, Inland Flooding, Wind, Tornadoes	All Jurisdictions
Residential Temporary Relocation	Hazardous Materials	Liberty County
Annual Review and Update of EOP	All Hazards	Liberty County
Public Awareness of Hazardous Material Spill	Hazardous Materials	Liberty County
Hazmat Team Training and Certification Support	Hazardous Materials	Liberty County
Fire Safety Outreach	Wildfire	City of Gum Branch
Firewise Program Promotion	Wildfire	Liberty County
Liberty County Community Wildfire Protection Plan Promotion	Wildfire	Liberty County
Continue education efforts with school age children	Wildfire	Liberty County
Public Education of Fire Threat Conditions and Evacuations	Wildfire	Liberty County
Dry Hydrant Installation	Wildfire	Liberty County
Department Personnel Wildfire Mitigation Training	Wildfire	City of Walthourville
Countywide Wildfire Susceptible Structure and Infrastructure Inventory	Wildfire	Liberty County
Hazardous Fuel Reduction	Wildfire	Liberty County





STAPLE+E Criteria and Evaluation

STAPLE+E is a composite evaluation matrix that was used to prioritize Clark County and its participating jurisdictions mitigation project and activities.

STAPLE+E Criteria: This section provides the STAPE+E Criteria, STAPLE+E Ranking for each Clark County's and participating jurisdiction mitigation projects and activities.

STAPLE+E Criteria									
Evaluation Category	Sources of Information								
Social	Mitigation actions are acceptable to the community if they do not adversely affect a particular segment of the population, do not cause relocation of lower income people, and if they are compatible with the communities' social and cultural values.								
Technical	Mitigation actions are technically most effective if they provide long- term reduction of losses and have minimal secondary adverse impacts.								
Administrative	Mitigation actions are easier to implement if the jurisdiction has the necessary staffing and funding.								
Political	Mitigation actions can truly be successful if all stakeholders have bee offered an opportunity to participate in the planning process and there is public support for the action.								
Legal	It is critical that the jurisdiction or implementing agency have the legal authority to implement and enforce a mitigation action.								
Economic	Budget constraints can significantly deter the implementation of mitigation actions. Hence, it is important to evaluate whether an actic is cost-effective, as determined by a cost-benefit review, and possible to fund.								
Environmental	Sustainable mitigation actions that do not have an adverse effect on the environment, that comply with Federal, State, and local environmental regulations, and that are consistent with the community's environmental goals, have mitigation benefits while beir environmentally sound.								





STAPLE+E Ranking

STAPLE+E Rankings – Clark County, NV																													
X = Not Applicable	+ = Favorable/Positive Impact													- = No	ot Favo	rable/	Negat	tive Im	pact										
STAPLE+E Criteria	Social Technical				Administrative Political				Legal Economic					Environmental															
Considerations	Community Acceptance	Effect on Segment of Population	Technical Feasibility	Long-term Solution	Secondary Impacts	Staffing	Funding Allocated	Maintenance/ Operations	Political Support	Local Champion	Public Support	State Authority	Existing Local Authority	Potential Legal Challenge	Benefit of Action	Cost of Action	Contribute to Economic Goals	Outside Funding Required	Effect on Land/Water	Effect on Endangered Species	Effect on HAZMAT/Waste Sites	Consistent with Community Goals	Consistent with Federal Law	Total Impact					
State Renewable Portfolio Standard Advocacy Initiatives	+	x	+	+	x	+	+	+	+	+	+	+	+	+	+	+	+	+	х	х	x	+	х	17					
Expansion of Community Solar Program	+	х	+	+	x	+	+	+	+	+	+	х	+	+	+	+	+	+	+	х	х	+	+	18					
Implementing Benchmarking Ordinance with Energy/Water Assistance for Building	+	x	+	+	x	+	+	+	+	+	+	x	+	+	+	+	+	+	+	х	x	+	+	18					
Efficiency Program Stacking Model	+	х	+	+	x	+	+	+	+	+	+	х	+	+	+	+	+	+	+	х	х	+	+	18					





STAPLE+E Evaluation

STAPLE+E is a composite evaluation matrix that was used to prioritize Clark County and its participating jurisdictions mitigation project and activities.

Three Factors of STAPLE+E Evaluation Matrix:

- First Factor STAPLE+E Evaluation: best for measuring feasibility and ease of implementation.
- Second Factor Mitigation Project Effectiveness (MPE): A multiplier based on the projects effectiveness to mitigate against a chosen hazard.
- Third Factor Hazard Risk Total (HRT): The sum of values (low through high) of each hazard the project is designed to mitigate. (HRT) = (HR1 + HR2 + HRn)

Calculation Equation: (Priority) = (STAPLE+E) + (MPE * HRT) STAPLE+E evaluations is a composite score is calculated and prioritized based on their total score: (Low = 0 - 25, Medium = 26 - 50, High = > 50).





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Next Steps in the Clark County MJHMP Process

Conduct Closeout Meeting with the Public and Steering Committee (Open Comment)

• Integrate Comments and Feedback

Incorporate Comments from Open Comment Period

Integrate
 Comments and
 Feedback from
 Open Comment
 Period for Plan Draft
 before State of NV
 Submission

Submit Plan for Review

•Submit the plan to NV Division of Emergency Management/Hom eland Security & FEMA

Revise an (if Necessary) per NV DHSEM and FEMA's Recommendation to Edit Plan

FEMA Adoption & Approval

 Upon FEMA APA (approval pending adoption); disseminate jurisdiction to be signed to complete the adoption package for FEMA

Implement, Evaluate, & Review

- •Over the next five (5) years following the adoption of the plan update, Clark County and participating jurisdictions must:
- Begin to implement the plan
- Regularly evaluate its effectiveness
- Review it for necessary changes





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Open Comment Review Period

As a key part of the planning process, Clark County is seeking feedback from stakeholders and the public to incorporate into the plan. Each participating jurisdiction in Clark County has its own section within the overall Clark County MJHMP.

Public input is a critical part of the process, so community members and residents are highly encouraged to participate, provide comments, and ask questions. A public comment period will be open May 1, 2023, through May 21, 2023.

A draft plan and public comment survey will be posted on the Clark County Website. Public comments and feedback are encouraged and submitted online via the www.clarkcountynv.gov.





Open Comment Review Period Marketing Documents



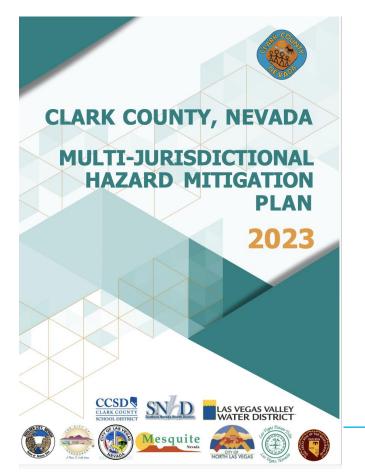
We are asking Mitigation Planning
Steering Committee Members to
advertise the Open Comment Period
within your community by sharing the
Press Release and Marketing Flyers online
and through your jurisdiction's social
media channels.

Please send screenshots of the advertisements (website and social media posts) to Constant Representative Mona Bontty at

mona.bontty@constantassociates.com.







QUESTIONS & COMMENTS











Thank You