



September 2, 2024 – September 20, 2024

**City of Alamogordo, NM Local Hazard
Mitigation Plan Update**



City of
ALAMOGORDO

Preparation for Open Comment Review Period



NOW YOU'RE READY
Be prepared. Be BOLD.



Open Comment Review Period



ALAMOGORDO, NM



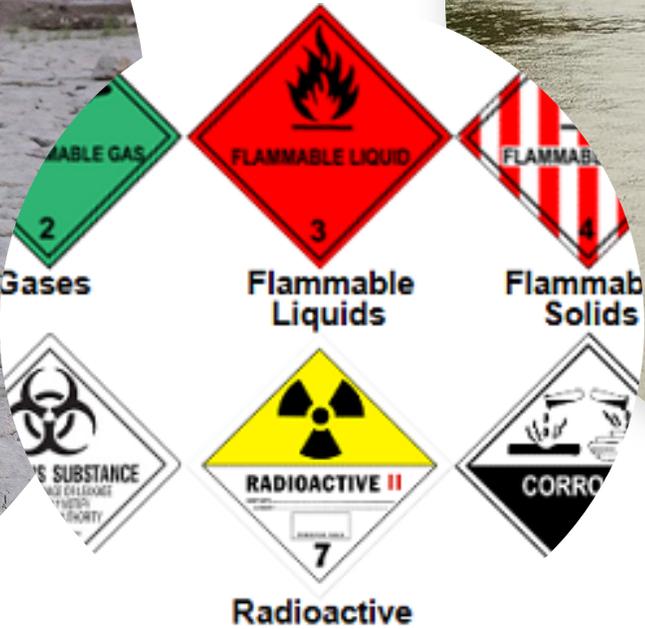
**LOCAL HAZARD
MITIGATION PLAN**

202X

A collage of images illustrating various hazards: a snowy road with cars, a yellow "STORM DAMAGE" sign, a lightning storm, a flooded road with a "Flood" sign, a firefighter, and a field of corn.



Why We Mitigate?



- Image Sources:**
- Drought: [CNN](#)
 - Flood: [Ready.gov](#)
 - Hazardous Material: [UC Santa Cruz](#)



What is Hazard Mitigation Planning?



Picture Source:
<https://ci.alamogordo.nm.us/344/Explore>



What is Hazard Mitigation?

According to the Federal Emergency Management Agency (FEMA), "Hazard mitigation planning reduces loss of life and property by minimizing the impact of disasters. It begins with state, tribal, and local governments identifying natural disaster risks and common vulnerabilities in their area. After identifying these risks, they develop long-term strategies for protecting people and property from similar events. Mitigation plans are vital to breaking the cycle of disaster damage and reconstruction."

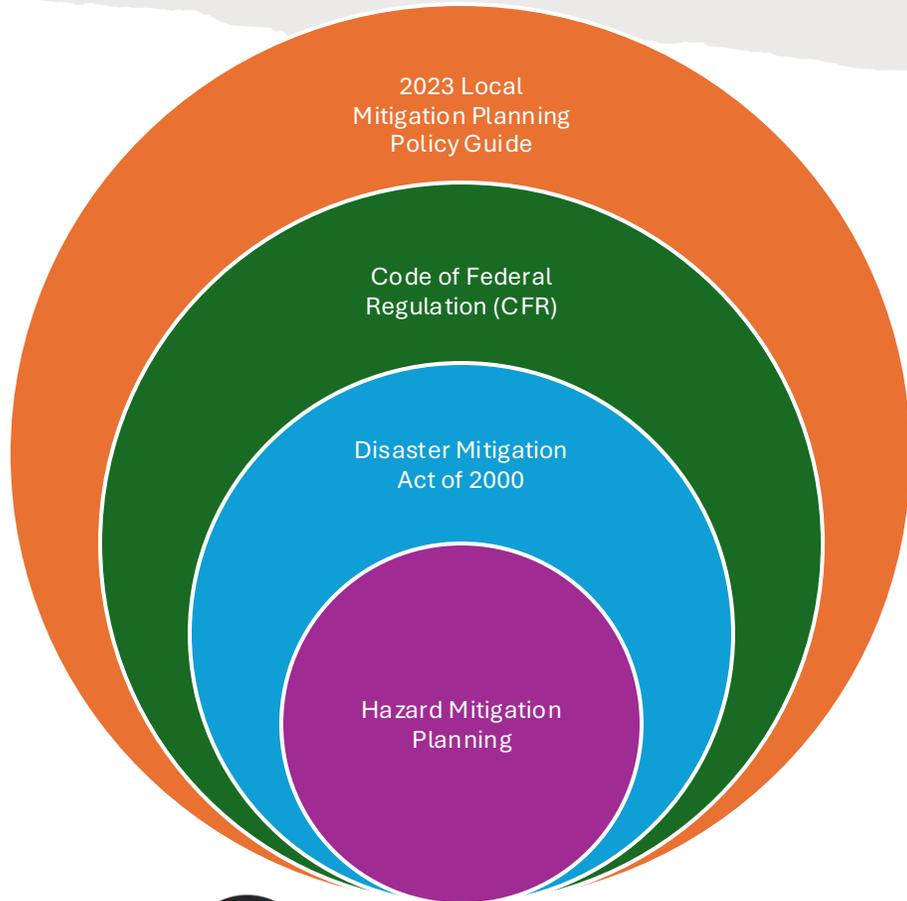


How Can Hazard Mitigation Planning Help?

- Build for a safer future for all citizens
- Foster cooperation for planning and resiliency
- Identify, prioritize and mitigate against hazards
- Assist with sensible and effective planning and budgeting
- Educate citizens about hazards, mitigation and preparedness



Hazard Mitigation - A Regulatory Process



These components provide a comprehensive regulatory framework for effective hazard mitigation planning, ensuring preparedness and resilience against potential disasters.

All Hazard Mitigation Plans must be updated and approved every five (5) years!

During the five (5) year period communities with approved hazard mitigation plans are eligible to apply for FEMA Hazard Mitigation Assistance Grant Program.



FEMA Hazard Mitigation Assistance Grants

- Currently, four (4) FEMA grant programs provide funding to local entities for hazard mitigation planning.
 - Three (3) of the grant programs are authorized under the Stafford Act.
 - The remaining two (2) programs are authorized under the National Flood Insurance Act and the Bunning-Bereuter-Blumenauer Flood Insurance Reform Act.

Rebuilding my community **after a major disaster** in a way that reduces future disaster losses.

Hazard Mitigation Assistance Program (HMGP)

Helping my community reduce risks from **future disasters** and natural hazards.

Building Resilient Infrastructure and Communities (BRIC)

Reducing the risk of **flood damage** to NFIP-insured buildings.

Flood Mitigation Assistance (FMA)

Making my community more resilient after a **wildfire disaster**.

HMGP Post-Fire Assistance

Source: <http://www.fema.gov/grants/mitigation>



Identify Hazards & Collect Hazard History

Alamogordo, NM Storm Data from NOAA Storm Database

Date: January 1, 2018, January 31, 2024

- Storm Events: 345 events reported with 10 different event types
 - 139 total days affected by the events
 - Seven (7) counties were affected by these events, including Otero County
 - **Property Damage totaling \$884,000**
 - **Injuries/Deaths: 1 Injured/0 Deaths**

SMART INVESTING
MITIGATION SAVES

EVERY \$1
SPENT ON
MITIGATION,
SAVES **\$6**
ON FUTURE
DISASTER
LOSSES

Natural Hazard Mitigation Saves: 2017 Interim Report
nibs.org/mitigationsaves

National Institute of BUILDING SCIENCES

FEMA



City of Alamogordo LHMP Update Sections

- Section 1** • Hazard Mitigation Program and Requirements
- Section 2** • Introduction, Planning Process, and Plan Maintenance Procedures
- Section 3 & 4** • Planning Area Description and Hazard Analysis and Risk Assessment
- Section 5** • Capabilities Assessment
- Section 6** • Mitigation Strategy
- Section 7** • Plan Approval and Adoption



Section 1: Hazard Mitigation Program and Requirement

- 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

The City of Alamogordo committed to drafting a functional, comprehensive, and inclusive update to the current local mitigation plan (2019).

As documented within the plan update, the City of Alamogordo actively participated in the planning process from its inception.

- Mitigation Planning Team 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 Planning Team activities, including a list of all meetings and their purpose, and a complete list of planning team participation is in Section 2 Mitigation Planning Team of the plan update.



Plan Development: Plan Drafting Stage

In February 2024, the planning process for the 202X HMP began. Select staff from City of Alamogordo Departments and stakeholders were invited to participate on the Mitigation Planning Team for the purpose of developing the 2024 HMP, in addition to representation from New Mexico Department of Homeland Security and Emergency Management (NMDHSEM).

Five (5) meetings/activities were held with the Planning Team, stakeholders and the public. Alamogordo Fire Department also copied documents for review and sent out meeting notices. The following meetings/activities of the plan update process include:

- February 23, 2024 – City of Alamogordo LHMP Client Kickoff Meeting
- May 9, 2024 – City of Alamogordo LHMP Kickoff Meeting – City Officials
- May 16, 2024 – City of Alamogordo LHMP Public Kickoff Meeting
- June 23, 2024 – City of Alamogordo LHMP Mitigation Strategy Update Meeting
- September 2-20, 2024 – City of Alamogordo LHMP Open Comment Review Period

A full description of Planning Team activities with documentation is contained in [Appendix B](#) of the Plan Update.



Data Collection

Three LHMP Surveys were used to collect information from the planning team, City Departments, stakeholders, and

Community Surveys: May-June 2024:

City Official Survey:

<https://form.jotform.com/241216344689158>

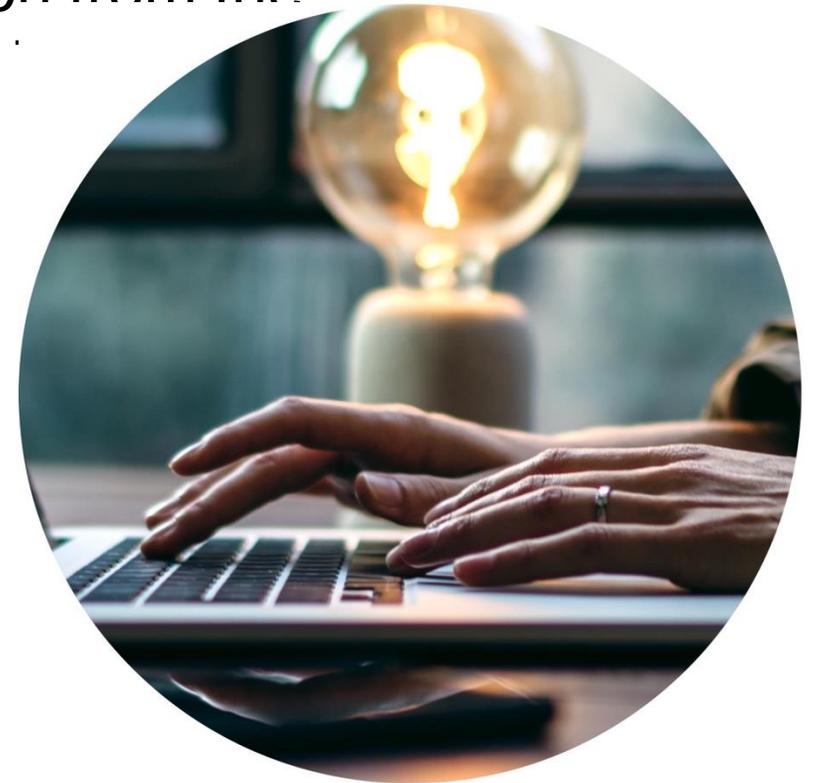
Community Survey:

<https://form.jotform.com/241212116578047>

Open Comment Survey: September 2-20, 2024

Open Comment Period Survey:

<https://form.jotform.com/242378585459170>



Documented Resources Used to Draft Plan

The Mitigation Planning Team with BOLDplanning, Inc conducted a comprehensive review of the existing Clark County documents that were included in the draft plan update:

- City of Alamogordo Critical Facilities List
- Previous City of Alamogordo LHMP Hazard Mitigation Plans
- City of Alamogordo Comprehensive Plan
- Otero County, NM Wildfire Protection Plan
- Nevada Climate & Adaption Resilience Plan
- State of New Mexico Enhanced Mitigation Plan
- City of Alamogordo Planning and Zoning Ordinances and Documents



Continued Public Involvement



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

- City of Alamogordo Mitigation Planning Team will continue to keep the public informed about its mitigation project and activities through the Alamogordo Fire Department (AFD).
- Copies of the City of Alamogordo Local Hazard Mitigation Plan Update will be available on the City's Local Hazard Mitigation Plan website and distributed to the City Departments and stakeholders.



Plan Maintenance Process

City of Alamogordo MPT, with help from BOLDplanning, Inc., has developed a method to ensuring monitoring, evaluation, and updating the plan.

- **Plan Monitoring**: 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**: The City of Alamogordo will begin their update process of the plan in the following year after plan adoption according to the FEMA DMA 2000 guidelines on local mitigation plan updates under the direction of Alamogordo Fire Department.



Section 3&4: Planning Area and Hazard Analysis and Risk Assessment

Verify Critical Facilities List

Develop Community Profiles

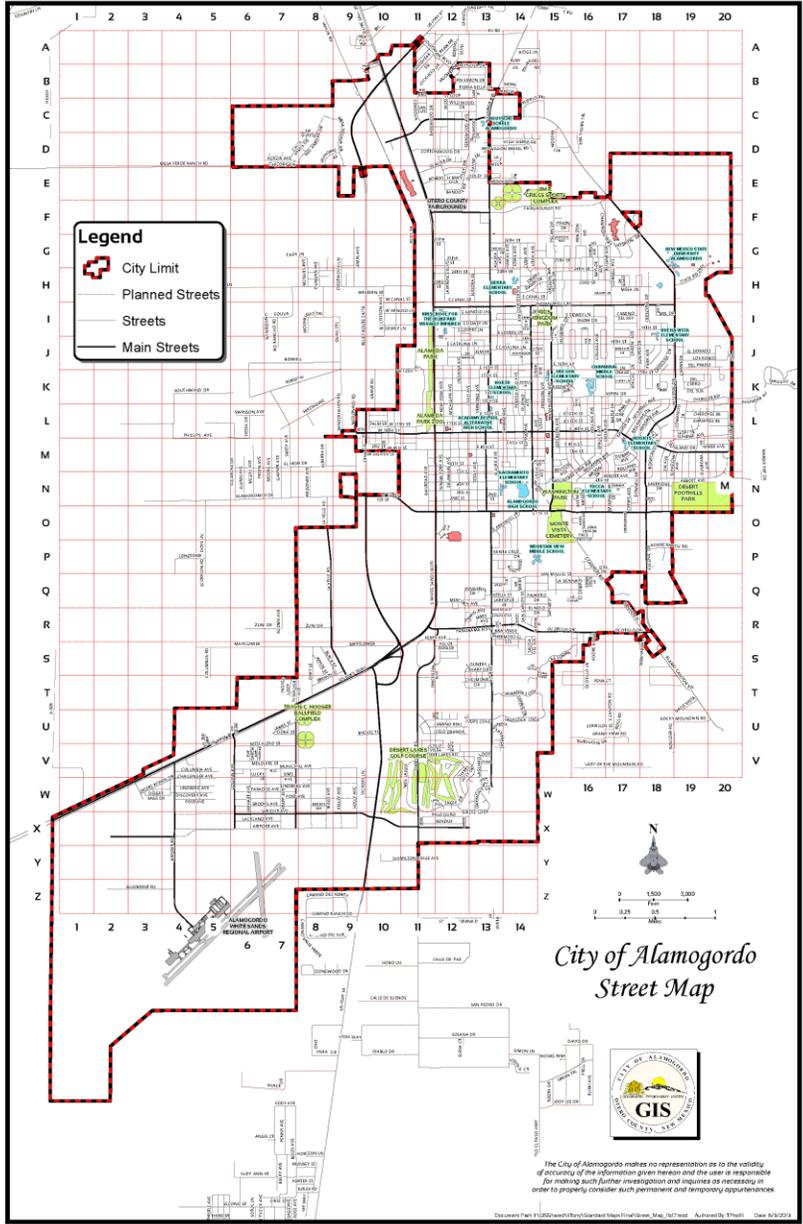
Identify Hazards & Collect Hazard History

Calculate Future Probability

Analyze Land Use & Development Trends



Develop Community Profile City of Alamogordo Planning Area



Map Source: City of Alamogordo, NM GIS

City of Alamogordo, NM LHMP Open Comment Period



City of Alamogordo Hazards Addressed in Plan Update

- Drought
- Flooding
- Wildfire
- Winter Storms
- Wind (new hazard for this plan update)

**New update for the LHMP Update Planning Process:
Include description of Climate Impact for each hazard of concern.**

The hazard analysis and risk assessment section of the plan update will discuss the impacts of climate change. Including this impact will show how climate change may shift the City's exposure to the hazard over time and will also be a guide to long term planning for hazard mitigation.



Hazard Vulnerability and Risk Assessment

During this section of the plan, will analyze the following for the jurisdiction:

- Hazards
- History
- Vulnerability

Conduct Final Risk Assessment:

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



Hazard Risk Summary



Hazard Risk Summary

Table 89: Probability Categories/Range Per Year

Probability Categories	Unlikely	Occasional	Likely	Highly Likely
Range (Per Year)	0%	1-10%	11-50%	51-100%

The table below outlines the City of Alamogordo’s general risk to this plan’s profiled hazards. The rankings are based on a composite evaluation of this plan’s risk assessment, namely, a hazard’s probability of occurring in the future, the vulnerability of a jurisdiction to a specific hazard, the intensity of past hazard impacts, and a joint evaluation of local experts and stakeholders. For reference, the probability categories/percentages previously indicated in Table 92 are shown above.

Table 90: Hazard Risk Summary

Jurisdiction	Drought	Flooding	Wildfire	Wind	Winter Storms
City of Alamogordo	Likely (28.43%)	Likely (48.53%)	Likely*	Highly Likely (112.38%)	Likely (16%)

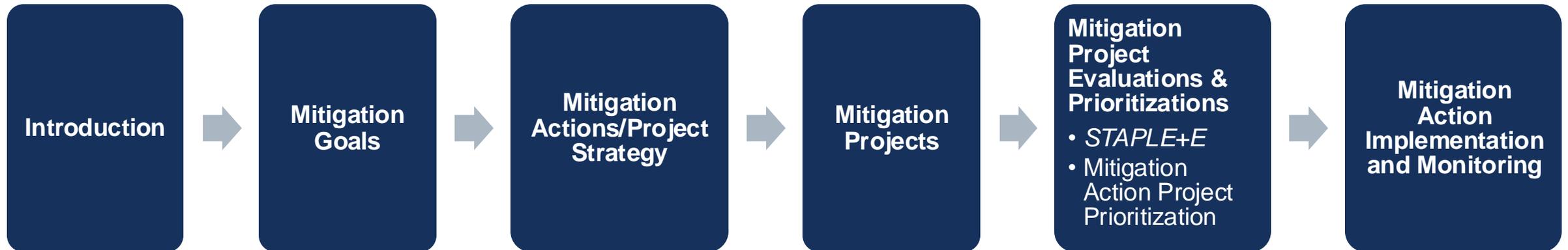
**Note: The hazard of wildfire is considered likely but without a definite calculation of probability. This is due to their being no record or evidence of wildfire in the planning period since the last update (2018). However, at the time of this plan update, while there has been evidence of wildfires in the planning area due to the declared disasters within Otero County, which includes the City of Alamogordo since 2018, it is still likely that the City of Alamogordo will experience wildfires in the future.*



Section 5: Capabilities Assessment



Section 6: Mitigation Strategy



Section 5: Mitigation Strategy

To support the mitigation goals, the City of Alamogordo and BOLDplanning, Inc. identified a comprehensive range of 18 possible and unique mitigation projects and activities.

- This plan update does include “carryover” projects from City of Alamogordo previous LHMP (2019), 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 – Section 6.4: Mitigation Projects and Table 105: Mitigation Project Evaluation & Prioritization Section.
- Full list of mitigation projects, their descriptions and prioritization per jurisdiction can be found in Appendix F – Mitigation Project Prioritization.



City of Alamogordo Mitigation Project Summary

Table 99: Mitigation Project/Activity Summary – Alamogordo, NM

Mitigation Project or Activity	Related Hazards	Responsible Party/Department	Status
Development of Desalination Plant	Drought, Wildfire	City of Alamogordo, Public Works, Engineering & Army Corps of Eng.	Completed, this project was completed in 2019 by the City Utilities Department.
Hire a Floodplain Manager	Flood	City of Alamogordo, Public Works, Engineering & Army Corps of Eng.	Removed, this project was deferred due lack of staff and resources and will not be carried over to the 2024 plan update.
North Diversion Project	Flood	City of Alamogordo, Public Works, Engineering & Army Corps of Eng.	Keep, moved to 202x plan update. During the last planning cycle, the City indicated that request has been sent to Army Corp of Engineers for a Letter of Support to begin this project. The City has requested support twice during the last plan update cycle. This project will be carried over to the 202X plan update because the City is hoping to collaborate with the Corp on this project during this plan update cycle.
South Diversion Project	Flood	City of Alamogordo, Public Works, Engineering & Army Corps of Eng.	Completed, this project was completed in 2021.
Alternate Water Source	Drought, Wildfire	City of Alamogordo Public works and Engineering and Legal	Keep, moved to 202x plan update.
Community Involvement Projects	Drought, Wildfire	Public Works, Forest Service	Deferred and Revised. This project will be included in the plan updated under the revised name of "City Mountain Spring Water System Update"



City of Alamogordo Mitigation Project Summary

Table 99: Mitigation Project/Activity Summary – Alamogordo, NM

Mitigation Project or Activity	Related Hazards	Responsible Party/Department	Status
Hire Emergency Manager	Drought, Flood, Wildfire, Winter Storm	City of Alamogordo Fire Department	Completed, this project was completed with the hire of the current Emergency Manager in November 2023.
Water Shed Thinning Project	Drought, Flood, Wildfire	City of Alamogordo Fire Department, Public Works, Forest Service	Deferred and Revised. This project will be included in this plan updated under the revised name of "Design and Implementation of Bonito Lake Water Shed Project".
Re-Design and Construction of Cofferd Dam	Drought, Flood, Wildfire, Winter Storm	Public Works, Army Corps of ENG, New Mexico Dam Safety Bureau, FEMA, and the Office of the State Engineer	Completed, this project was completed in October 2022.
Review Existing Floodplain Regulations	Flooding	City of Alamogordo Public Works	New project for 202X plan update
Update of the City's Master Drainage Plan	Flooding	City of Alamogordo Public Works and Planning and Zoning	New project for 202X plan update
Maintenance and Update Sediment Basin	Flooding	City of Alamogordo Public Works	New project for 2024 plan update. Part of the project has been awarded, however, the City is including this project into this plan update in hopes to secure additional funding to complete.
Design and Construction Intersection Improvements	Flooding	City of Alamogordo Public Works	New project for 202X plan update
Parallel Pipeline Project	Wildfire, Flooding, Drought	City of Alamogordo Utilities	New project for 202X plan update
Create and Implement a Water and Sewer Master Plan	Flooding, Drought, Wildfire	City of Alamogordo Utilities	New project for 202X plan update
Upgrade the City of Alamogordo's EOC Technology	All Hazards (Drought, Flooding, Wildfire, Wind, Winter Storms)	City of Alamogordo Information Technology Department/Fire Department	New project for 202X plan update
Annual Review and Update of City's Local Hazard Mitigation Plan (LHMP)	All Hazards (Drought, Flooding, Wildfire, Wind, Winter Storms)	City of Alamogordo Fire Department	New project for 202X plan update
Annual Review and Update of the City of Alamogordo Continuity of Operations Plan (COOP)	All Hazards (Drought, Flooding, Wildfire, Wind, Winter Storms)	City of Alamogordo Fire Department	New project for 202X plan update
Annual Review and Update of the City of Alamogordo	All Hazards (Drought, Flooding, Wildfire, Wind, Winter Storms)	City of Alamogordo Fire Department	New project for 202X plan update



City of Alamogordo Mitigation Project Summary

Table 99: Mitigation Project/Activity Summary – Alamogordo, NM

Mitigation Project or Activity	Related Hazards	Responsible Party/Department	Status
Emergency Operations Plan (EOP)			
Upgrade City's Critical Facilities with Solar Panels for Alternate Energy Source	All Hazards (Drought, Flooding, Wildfire, Wind, Winter Storms)	City of Alamogordo City Manager/Finance Department	New project for 202X plan update
Construction to Update Fire Station 2	All Hazards (Drought, Flooding, Wildfire, Wind, Winter Storms)	City of Alamogordo Fire Department; City of Alamogordo Finance Department	New project for 202X plan update
Promote City's Fire Prevention and Public Education Programs	Wildfire	City of Alamogordo Fire Department; City of Alamogordo PIO	New project for 202X plan update
Develop a City Sheltering Plan in coordination with the City Public Schools	All Hazards (Drought, Flooding, Wildfire, Wind, Winter Storms)	City of Alamogordo Fire Department; Alamogordo Public Schools; City of Alamogordo Police Department	New project for 202X plan update
Procure additional trucks and tools to respond to wildfires	Wildfire	City of Alamogordo Fire	New project for 202X plan update



STAPLE+E Criteria and Evaluation

- **STAPLE+E** is a composite evaluation matrix that was used to prioritize the City of Alamogordo's mitigation project and activities.
- **STAPLE+E Criteria**: the tables in Section 6.4.1 provides the STAPE+E Criteria, STAPLE+E Ranking for the City's 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 been offered an opportunity to participate in the planning process and if 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 action 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 being environmentally sound.



STAPLE+E Ranking

STAPLE+E Rankings – Clark County, NV																								
STAPLE+E Criteria	+ = Favorable/Positive Impact											- = Not Favorable/Negative Impact												
	Social		Technical			Administrative			Political			Legal			Economic				Environmental				Total Impact	
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 HAZMA T/Waste Sites	Consistent with Community Goals		Consistent with Federal Law
State Renewable Portfolio Standard Advocacy Initiatives	+	X	+	+	X	+	+	+	+	+	+	+	+	+	+	+	+	+	X	X	X	+	X	17
Expansion of Community Solar Program	+	X	+	+	X	+	+	+	+	+	+	X	+	+	+	+	+	+	+	X	X	+	+	18
Implementing Benchmarking Ordinance with Energy/Water Assistance for Building	+	X	+	+	X	+	+	+	+	+	+	X	+	+	+	+	+	+	+	X	X	+	+	18
Efficiency Program Stacking Model	+	X	+	+	X	+	+	+	+	+	+	X	+	+	+	+	+	+	+	X	X	+	+	18



STAPLE+E Evaluation

STAPLE+E is a composite evaluation matrix that was used to prioritize the City's 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).



Next Steps in the City of Alamogordo LHMP 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 NM Submission

Submit Plan for Review

- Submit the plan to NM Department of Homeland Security and Emergency Management & FEMA

Revise an(if Necessary) per NMDHSEM 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, the City of Alamogordo must:
- Begin to implement the plan
- Regularly evaluate its effectiveness
- Review it for necessary changes



Open Comment Review Period

As a key part of the planning process, the City of Alamogordo is seeking feedback from stakeholders and the public to incorporate into the plan.

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 September 2, 2024, through September 20, 2024.**

A draft plan and public comment survey will be posted on the City of Alamogordo Local Hazard Mitigation Plan Website. Public comments and feedback are encouraged and submitted online via the <https://ci.alamogordo.nm.us/1033/Local-Hazard-Mitigation-Plan>.



Open Comment Review Period Contact Information

Please contact the following individuals with questions or feedback regarding the Alamogordo LHMP Open Comment Period Review Period:

- **City of Alamogordo Representative: Jerry Ramirez, Fire Chief**

- Email: jramirez@ci.alamogordo.nm.us

- **BOLDplanning Project Manger/Lead Hazard Mitigation Planner:
Emily Long**

- Email: emily@southerncharmcn.com





September 2, 2024 – September 20, 2024

**City of Alamogordo, NM Local Hazard
Mitigation Plan Update**



**City of
ALAMOGORDO**

Thank you!



NOW YOU'RE READY
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