



El Dorado County Hazard Mitigation Plan

Public Workshop #1

Date: 27 February 2024
5:30 p.m. – 7:30 p.m. PST

Meeting at: Microsoft Teams Meeting
(see meeting information in the
calendar invite)

Project: County of El Dorado Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) Update
Public Workshop #1

Agenda Topics

1. Introductions

Ms. Juliana Prosperi opened the meeting by introducing the WSP team. Scott Bare then introduced his team at the El Dorado County Office of Emergency Services (OES). Ms. Prosperi proceeded to introduce Slido, a feedback tool employed by WSP to engage participants in virtual meetings.

2. Hazard Mitigation and the Disaster Mitigation Act

Ms. Prosperi introduced the concept of hazard mitigation by explaining the escalating disaster costs in the United States. Taxpayers bear the burden when disaster strike, with FEMA spending over \$59 billion annually on disaster recovery. Mitigation planning, defined as sustained action to reduce long-term risk, emerges as a cost-effective investment, returning six dollars for every dollar spent.

Ms. Prosperi explained that hazard mitigation, a key aspect of emergency management, focuses on minimizing natural hazards, breaking the cycle of high costs. The regulatory context, mandated by the Disaster Mitigation Act (DMA), requires regular updates of Hazard Mitigation Plans (HMPs) for eligibility in federal disaster funding. Adopting the Local Hazard Mitigation Plan (LHMP) into the Safety Element ensures eligibility for state funding through the California Disaster Assistance Act.

3. Role of the Hazard Mitigation Planning Committee

Ms. Prosperi provided a comprehensive overview of the roles and responsibilities within the Hazard Mitigation Planning Committee (HMPC), Local Planning Teams (LPTs), El Dorado County, and the WSP team. She briefly reviewed various stakeholders invited to participate in this plan. Ms. Prosperi concluded this segment by briefly addressing the various levels of stakeholder participation.

4. Public Involvement

Ms. Prosperi outlined the strategies for public and stakeholder engagement. Under federal statute, the MJHMP update must include at least three opportunities for public involvement, including once during the drafting stage, and once prior to approval. The MJHMP process must also describe how a jurisdiction will continue to engage the public after plan implementation. Ms. Prosperi showcased the County's MJHMP webpage, a central hub where upcoming press releases, draft plans, and other pertinent documents



related to the planning process will be posted, offering the public an accessible platform for review. She also reviewed responses received to date on the public survey, which is set to close on March 1st.

Ms. Prosperi initiated the first Slido poll, asking participants, "How can we improve community awareness and preparedness of natural disasters such as earthquakes, floods, or wildfires?" The poll was multiple choice, and the following results were selected by 14 participants:

Response	Percent of Vote
Collaborate with local media for public awareness campaigns	86
Utilize social media and other digital platforms for information dissemination	86
Distribute educational materials through local schools and community centers	64
Host workshops and seminars on disaster preparedness	36
Conduct regular community drills and exercises	36
Implement signage and information boards in high-risk areas	29
Establish a community alert system	29
Other please specify in chat*	7

*Note: While "Other" was selected by a participant, no further information was provided.

5. Planning Process Overview

Ms. Prosperi briefly overviewed FEMA's four phase mitigation planning process, then further discussed the details of each phase, starting with Phase 1: Organize Resources.

Phase 1: Organize Resources

- Determine Planning Area
- Build the Planning Team
- Establish the Hazard Mitigation Planning Team
- Create an Outreach Strategy
- Review Community Capabilities
- Obtain Community Commitment to Mitigation

Phase 2: Conduct a Risk Assessment

- Identify and describe hazards
- Identify assets
- Assess risk
- Summarize vulnerability

After discussing assets and risks, Ms. Prosperi initiated the following Slido poll, "What assets do you consider important to protect from various hazards and potential hazard events?" The poll was open ended and ten participants provided the following responses:

Response	# of Votes
People	4
People! And homes.	2
Water wells	1
Fire stations	1
Roadways	1
Government buildings	1
Water infrastructure	1
The people particularly the most vulnerable who will need help.	1



Natural resources	1
Our natural settings	1
Life is essential	1
Schools	1
Roads/ ingress egress	1
Grocery stores	1
Hospitals	1
Pets	1
Infrastructure	1

Following the hazard risk summary slide, where Ms. Prosperi displayed the results of the risk assessment performed by the planning team, she asked the following questions via Slido, "Do you agree with these ratings? Is there something we missed? Is there anything we should change?" The following open-ended responses were provided via Slido and the meeting chat:

- Cameron Park CSD also has high wildfire risk (per CalFire ratings). Also, I'm not an expert but I would think Georgetown, Cameron Park, and Placerville are not at significant risk of seiches
- Dam flooding - not sure why it is so high in some areas.
- For county yes, can speak to others
- Looking at One-Way access neighborhoods as a part of the vulnerability assessment
- Not sure how a seiche is a risk to anyone but Tahoe?
- One more, debris flow and landslide can happen in Cameron Park (happened last winter)
- why is dam failure viewed as high risk in this county?
- Wondering if City of Placerville extreme heat should be medium
- Yes, I agree.

In response to comments about the hazard risk rating of seiches, Ms. Prosperi clarified that was a clerical error and the risk rating is low.

Phase 3: Develop a Mitigation Strategy

- Review & update plan goals & objectives
- Review mitigation alternatives
- Draft an action plan

Phase 4: Plan Implementation & Maintenance

- Keep the Plan Current
- Review and Adopt the Plan
- Create a Safe and Resilient Community



A participant asked, "Where in the 4 steps are we now?" Ms. Prosperi responded that we are currently at the end of phase 2. The Planning team just had their second HMPC meeting where we covered findings from the Hazard Identification and Risk Assessment (HIRA). The HIRA is the most technical and detailed of the chapters, and the one that we complete and share for review first.

6. Schedule and Next Steps

Ms. Prosperi then reviewed the schedule and next steps, provided below and in the accompanying slides.

Phase/Task	March	April	May	June
Task 4: Implement and Monitor the Plan				
Update Goals	■			
Mitigation Action Plan Update	■ ■			
HMPC Meeting #3	■			
Develop New Mitigation Actions	■ ■			
Phase 3: Develop a Mitigation Strategy				
Draft Plan	■ ■			
Administrative Draft MJHMP		■		
Draft MJHMP + Annexes		■ ■ ■		
21-Day Public Review			■ ■ ■	
Public Workshop #2				■
Incorporate Public Comments into Final MJHMP			■	
Cal OES 45-Day Review			■ ■ ■ ■ ■	
FEMA 45-Day Review				■ ■ ■ ■ ■
MJHMP Local Adoptions				■
FEMA MJHMP Approval and Grant Closeout				■

7. Questions and Answers

Q: Just FYI, it was extremely hard to find the link for this meeting. The meeting ID and password from the EDSO Facebook page did not work, and the flier was non-clickable. I finally found a working link via El Dorado County Fire's website.

A: Sorry about that! Thanks for letting us know, we'll be sure to make it easier next time.

Q: How often does a mitigation plan need to be updated?

A: Mitigation Plans need to be updated every five years to remain eligible for FEMA grant funding.

Q: Where is loss of life in the last slide of risk (Hazard Profiles)?

A: Loss of life or injuries would generally fall under the "Extent/Magnitude/Severity" subsection of the Hazard Profile/Risk Assessment. Impacts to people is also a stand-alone subsection in the Vulnerability Assessment of each hazard profile.



Q: Are man-made wildfires included as a natural hazard as part of this?

A: Yes, both natural and human-caused wildfires are included.

Q: Where does the Annual Probability of Fire map come from?

A: The data is from CAL FIRE and their Fire and Resource Assessment Program (FRAP) and the map was compiled by WSP.

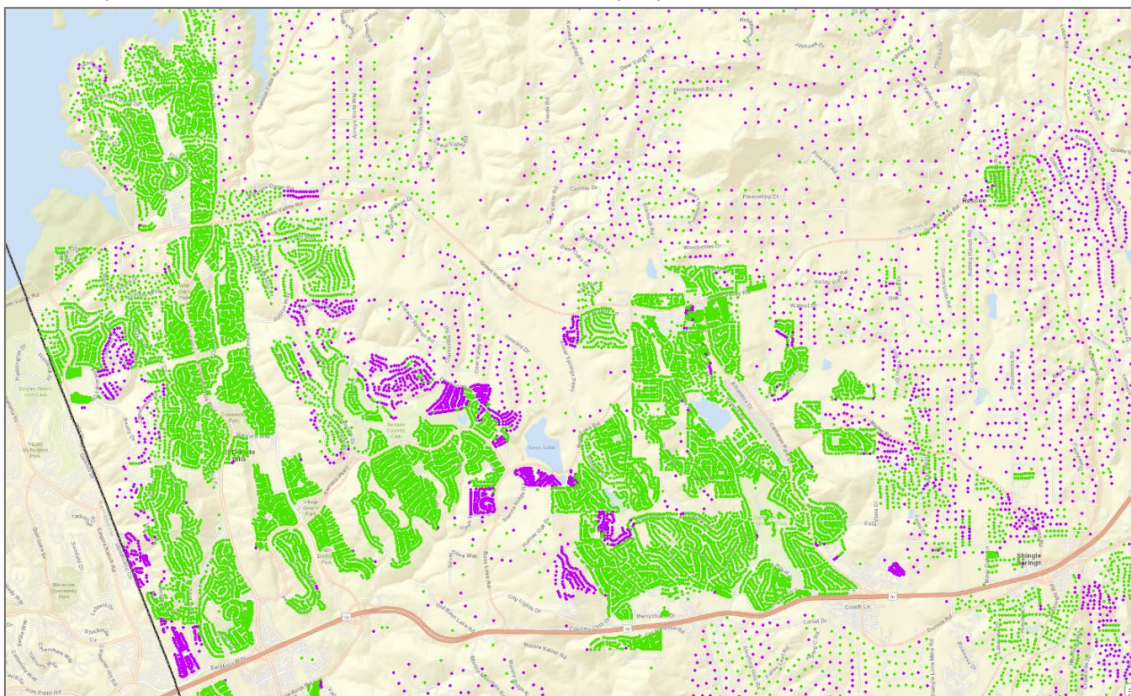
Q: Why is there only 93,000 people at risk to wildfire?

A: The data for this figure was downloaded from the CAL FIRE Fire Threat dataset. Below is an excerpt about this dataset:

"Fire threat provides a measure of fuel conditions and fire potential in the ecosystem, representing the relative likelihood of "damaging" or difficult to control wildfire occurring for a given area. Fire Threat is not a risk assessment by itself, but can be used to assess the potential for impacts on various assets and values susceptible to fire. Impacts are more likely to occur and/or be of increased severity for the higher threat classes.

Fire threat is a combination of two factors: 1) fire probability, or the likelihood of a given area burning, and 2) potential fire behavior (hazard). These two factors are combined to create 5 threat classes ranging from low to extreme."

In addition to the exclusion of the City of South Lake Tahoe from the dataset (because they are not participating in the El Dorado County 2024 MJHMP), many homes in the unincorporated County are clustered in "low threat" zones. The following image which shows residential and multi-residential parcels in and around El Dorado Hills. Each square represents one residential structure, assumed to have the average household size for the unincorporated County, which is estimate at 2.52 residents. Green squares are homes in low threat zones, while purple dots are homes in moderate-to-extreme





threat zones. While the parcels at threat cover a larger portion of land, the parcels at low threat are densely clustered. According to the CAL FIRE data, this works out to about 93,602 individuals in moderate-to-extreme fire threat areas, and 76,258 individuals in low threat areas.

Q: For applicable hazards, will periodic county-wide emergency simulations be conducted for the participating response groups and entities? Will any be done during peak seasons? For example, simulating wildfires blocking the State Route 89 entrance and exit points. Thank you!

A: While simulation in real-time is not a part of the MJHMP update, they can be completed as part of a desktop simulation or modelling exercise. Tabletop exercises are also commonly part of an Emergency Operations Plan. Additionally, EDC OES does multiple drills and simulations for fires and flooding throughout the year, including during peak and non-peak seasons.

Q: I apologize if I missed this explanation earlier but why are there portions of EDC in the Tahoe Basin not included in these maps?

Q: The City of South Lake Tahoe drafted their own LHMP in 2022, so their planning area (city limits) is not included in the MJHMP.

Q: But there are unincorporated areas of EDC in the Tahoe basin; not all of the area is within the City of South Lake Tahoe limits.

A: All unincorporated areas of EDC, including those in the Tahoe Basin outside the South Lake Tahoe city limits, are included in the risk assessment analysis.

Q: To what degree do you review and examine the past issues and failures when doing future planning & mitigation - learn lessons from failures?

A: In the process of drafting the MJHMP, we gather status updates on the mitigation actions included in the existing plan. As part of those updates, we review actions that have been completed, deleted, or carried forward from the previous plan. Through that process, we are able to see what projects are not working, which projects are no longer a priority, and also what projects or actions may be less effective and need to be revised. Additionally, if a mitigation action is unsuccessful, it is hard to prove that it was the action itself which failed, or if there were extenuating circumstances. It is much easier to prove mitigation successes. For example, a well-placed fire break saved a neighborhood during the Caldor Fire, and that is something we can say definitively worked, and those are the kinds of mitigation ideas we can bring into the mitigation planning process.

Q: How does El Dorado Hills have a higher probability of fire than the forest near Highway 88?

A: The following information is provided by CAL FIRE regarding its annual probability of wildfire data:

"This data represents mean projected annual probability (%) of wildfire occurrence for the period 2021-2050. Probability was projected annually through 2099 using each of four climate models (CanESM2, HadGEM2-ES, CNRM-CM5, and MIROC5) under the Representative Concentration Pathway (RCP) 8.5 emissions scenario at 1 km resolution. Predictive models were trained using a GAM framework on a spatially randomized subset of data from 1980-2019, and incorporate predictions of actual evapotranspiration, climatic water deficit, and local housing density, as well as distance to roads and electrical infrastructure, area of cultivated land, and historical fire perimeters. Data presented here represent mean probability of wildfire across all four climate models and over the thirty-year period from 2021-2050. 1 km grid cells with >=50% cultivated land, urban cover, water, or barren/rock were excluded in the model or for purposes of this tool."



In summation, this data included factors such as housing density, distance to roads, and electrical infrastructure, all of which would increase the likelihood of a fire start and all of which are much more common in residential areas than forest lands.

Q: Do hazard disaster response evaluations include concurrent events - say, road construction closure with an out-of-control wildfire?

A: HMPs don't include detailed hazard disaster response evaluations or scenario planning given these plans are updated every 5 years. The Draft Greater Placerville Wildfire Evacuation Preparedness, Community Safety, and Resilience Study does include response evaluations, which assumes routes have been blocked by wildfires.

Q: Question regarding how evacuation is addressed in the Plan. There are the one-way in/out neighborhoods - how do we get input in regarding that and where in the planning phases does this topic fit? (Firewise Action Plans provide mitigation recommendations - these may be a useful data source - might be able to get them from the Office of Wildfire Preparedness and Resilience [OWPR] or CAL FIRE)

A: Legislation regarding evacuation and accessibility can be assessed at different scales and should be incorporated into the County's Safety Element. However, a Countywide Wildfire Evacuation Analysis will be prepared as a supplemental study that will be integrated into the MJHMP risk assessment and mitigation strategy. This analysis will evaluate wildfire scenarios for various communities in the County to comply with legislative requirements associated with Senate Bill 99, Assembly Bill (AB) 747, and AB 1409. Additionally, one-way in/out neighborhood maps are being examined for possible mitigation activities. For example, if a one-way in/out route gets blocked, we are trying to determine safe places for those communities to congregate. If possible, more roads will be added. Some communities are also coming together and adding their own secondary evacuation routes. In addition, education is already underway in these communities, and we are implementing vegetation management projects and defensible space inspections to further support wildfire preparedness and prevention.

Q: When developing EDC's mitigation strategies, are you collaborating with other jurisdictions in EDC that have their own LHMP to ensure the strategies align and/or are complementary?

A: Yes. Other agencies like El Dorado Irrigation District and the City of South Lake Tahoe already have LHMPs in place. They also have representatives participating in the County's Hazard Mitigation Planning Committee for the MJHMP, and as part of this plan update we will review the mitigation strategies in both plans to ensure they align and are mutually-reinforcing.

Q: We have a concern that the County road maps suggest there are evacuation routes that do not exist in the Oak Hill area, and they do not show up as one-way in/out neighborhoods in mapping tools, such as OWPR mapping tool.

A: There is a difference between private and County roads. Some roads that are not regularly maintained simply do not exist anymore, and if they are private roads, we do not have jurisdiction over those roads. However, any County road in poor condition should be reported. Additionally, these maps were created by the CAL FIRE Subdivision Review Program and the County recognizes that some neighborhoods were missed. We have been reporting these areas to CAL FIRE so they can amend their data accordingly.



Meeting adjourned at 7:30 p.m.





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El Dorado County Multi-Jurisdictional Hazard Mitigation Plan Update

Public Workshop Meeting #1
February 27, 2024 5:30 – 7:30 PM



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Meeting Agenda

1. Introductions
2. Hazard Mitigation and the Disaster Mitigation Act
3. Role of the Hazard Mitigation Planning Committee
4. Public Involvement
5. Planning Process Overview
6. Schedule and Next Steps
7. Questions and Answers



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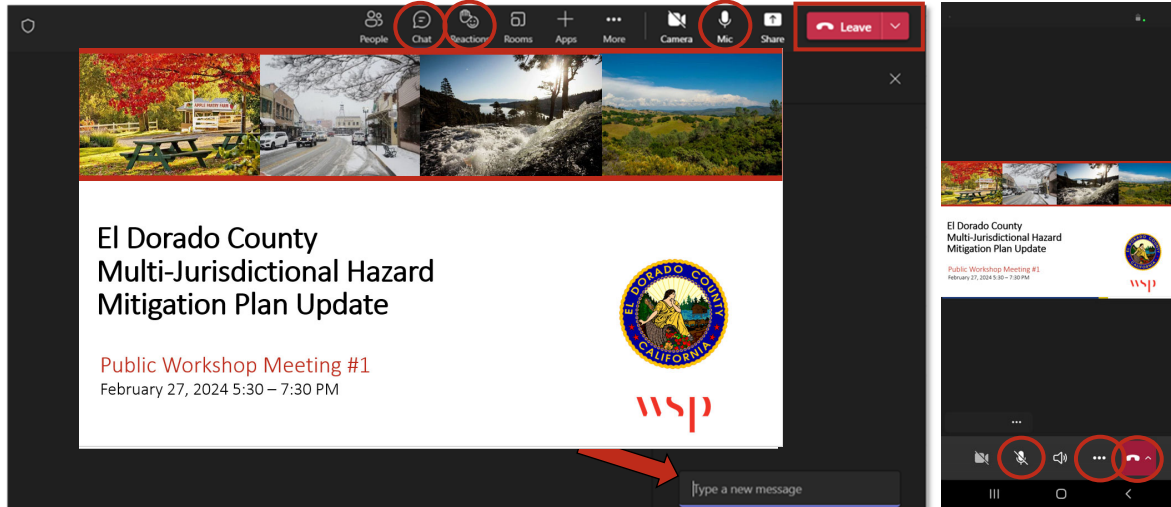
Meeting Logistics

- Please mute your mic when not speaking.
- ...but please feel free to unmute when you have something to say!
- You can also use the chat log to make comments, ask questions, or provide information.
- Slides and the meeting summary will be made available.



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Teams Overview



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slido



Join at [slido.com](https://www.slido.com)
#EDC

① Start presenting to display the joining instructions on this slide.

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Introductions



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Introductions

El Dorado County Sheriff's Office

- Scott Bare
- Greg Almos
- Moke Auwae
- Michael Lilienthal
- Troy Morton
- Leslie Schlag
- Jeff Whitlock
- County Emergency Management Coordinators
- Federal & State Partners
- Other Stakeholders

WSP Environment & Infrastructure Project Team

- Juliana Prospero, AICP – Project Manager
- Jeff Brislawn, CFM – Hazard Mitigation Technical Lead
- Melissa Baum – Hazard Mitigation Planner
- Josh Schnitzlein – Senior Environmental Planner
- Mack Chambers – GIS Specialist
- Donna Valasek – GIS Specialist



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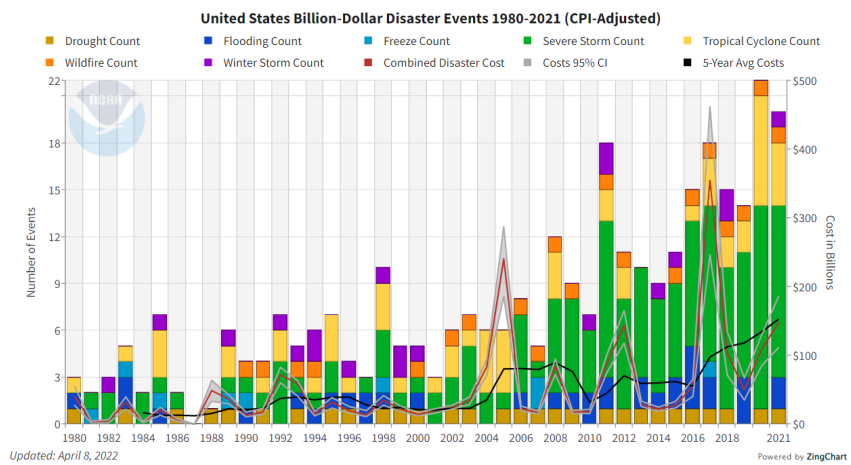
Hazard Mitigation Planning and the Disaster Mitigation Act



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Trends Resulting in Increased Disaster Costs

- Population & community growth
 - More people living in hazardous areas
 - Greater exposure to risk: people, infrastructure, buildings
- More hazard events
- More disaster declarations
- Increase in disaster response & recovery costs



Updated: April 8, 2022

Powered by ZingChart



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Why Hazard Mitigation is a Priority

- 1 **Spiraling costs of response and recovery;** the cost of doing nothing is too much
- 2 Many **events are predictable and repetitive;** we know what to expect and can break the damage/rebuild cycle
- 3 Loss reduction activities can be **effective, cost-beneficial, and environmentally sound**
- 4 There are **legal and moral responsibilities** to prevent future disasters
- 5 There are **funds available** to help



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How Can We Reverse These Trends? Hazard Mitigation!

Mitigation: Any *sustained* action taken to reduce or eliminate long term risk to human life and property from natural and man-made hazards.



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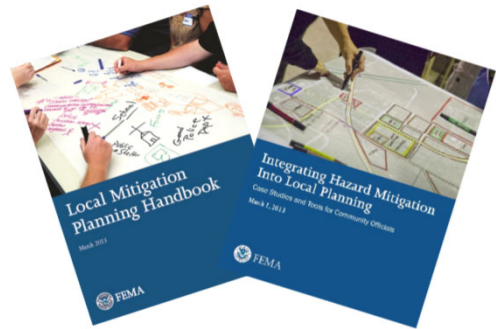
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Disaster Mitigation Act of 2000

Federal Legislation

44 CFR 201.6

- Requires communities to update their hazard mitigation plans every 5 years to remain eligible for federal pre- and post-disaster funding for hazard mitigation grants from FEMA
- Plan ensures the jurisdictions in the County will remain eligible for mitigation projects when funding becomes available



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What is Mitigation Planning?

A **process** for the County of El Dorado to:

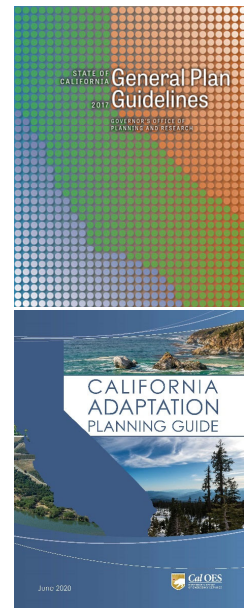
- Convene Hazard Mitigation Planning Committee
- Identify risks and solutions in a pre-disaster environment
- Assess the potential impacts to those hazards
- Update the risk assessment to reflect current hazards, risk, and vulnerability
- Report progress on mitigation actions from prior plan
- Develop revised goals, objectives, and new mitigation actions to reduce hazard impacts
- Prioritize and implement mitigation actions
- Incorporate mitigation actions into other existing planning mechanisms
- Document progress and note changes in priorities
- Guide mitigation activities in coordinated and economic manner
- Create consistent eligibility for Hazard Mitigation Assistance grants



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California Legislative Requirements

SB 552	<ul style="list-style-type: none"> Requires the County establish a standing drought task force to facilitate drought and water shortage preparedness for state small water systems, domestic wells, and other privately supplied homes within County. The County must develop a plan demonstrating the potential drought and water shortage risk and interim and long-term solutions for state small water systems and domestic wells (2021).
AB 747 AB 1409 SB 99	<ul style="list-style-type: none"> Requires the identification of evacuation routes and evaluation of their capacity, safety, and viability under a range of emergency scenarios. AB 1409 requires the identification of evacuation locations during emergencies. SB 99 requires the identification of residential developments in hazard areas that do not have at least two emergency evacuation routes (2019).
SB 1035	<ul style="list-style-type: none"> Addresses climate adaptation strategies in Safety Element and an update of climate data at least every 8 years (2018).
SB 379	<ul style="list-style-type: none"> Requires inclusion of climate vulnerability assessment and integration of adaptation strategies in the Safety Element and encourages climate change discussion in LHMP (2015).
SB 1000	<ul style="list-style-type: none"> Requires inclusion of environmental justice and equity goals and policies (climate equity) in the Safety Element if there are disadvantaged communities. These policies are proposed to reduce health risks, promote engagement, and address needs (2016).
SB 1241	<ul style="list-style-type: none"> Requires Safety Element to address wildfire risks in State Responsibility Areas and Very High Fire Hazard Severity Zones, develop policies to mitigate wildfire risk, and includes review by State Board of Forestry and Fire Protection (2012).
AB 2140	<ul style="list-style-type: none"> Links LHMPs and Safety Elements by encouraging the adoption of LHMPs into Safety Elements and by tying funding eligibility to approval of LHMPs (2006).



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Role of the Hazard Mitigation Planning Committee



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Roles and Responsibilities

Hazard Mitigation Planning Committee

- Coordinate with respective LPTs at jurisdictions
- Must attend all HMPC Meetings (1.5 to 2 hours)
- Provide requested Plan Update Guide
- Help prioritize hazards
- Help spread the word about the MJHMP
- Review Draft MJHMP and provide comments
- Identify and partner on mitigation projects
- Assist with and participate in public review process
- Coordinate formal adoption



Local Planning Teams

- Participate in the planning process
- Assist with updating the plan's content
- Tailor the plan to meet specific needs and issues
- Participation is required for plan approval

El Dorado County

- Oversee the planning process
- Contract management

WSP

- Facilitate the planning process
- Project management
- Risk assessment and plan update/development



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Build a Planning Team

• Participating Jurisdictions

- City of Placerville
- Georgetown Divide Public Utility District
- County Office of Education
- Cameron Park CSD

• County Staff

- Sheriff's Office
- Environmental Management
- Emergency Medical Services Agency
- Agriculture Commission
- Planning and Building Department

• Federal Agencies

- FEMA Region IX
- National Oceanic Atmospheric Administration/National Weather Service

• State Agencies

- California Office of Emergency Services
- California Natural Resources Agency
- California Department of Fire Protection and Forestry

- Other

- El Dorado County Water Agency
- Fire Safe Council



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Stakeholders

- Alliance of Regional Collaboratives for Climate Adaptation (ARCCA)
- American River Conservancy
- Barton Hospital
- CAL FIRE
- California Tahoe Conservancy
- Camp Richardson Resort
- Clarksville Region Historical Society
- County Agencies
- County Resource Conservation Districts
- El Dorado Community Foundation
- El Dorado County Farm Trails Association
- El Dorado Hills Chamber of Commerce
- League to Save Lake Tahoe
- Local Religious Organizations
- Local Community Service Districts
- Local Fire Districts
- Local Public Utilities Districts
- Local Schools, Districts, and Colleges
- Major local employers
- Marshall Hospital and Medical Center
- Meyers Community Foundation
- Neighboring Counties
- New Morning Youth and Family Services
- NGOs and CBOs
- Shingle Springs Bank of Miwok Indians
- Sierra Climate Adaptation and Mitigation Partnership (Sierra CAMP)
- Sierra Nevada Alliance
- South Lake Tahoe Family Resource Center
- Tahoe Chamber of Commerce
- Tahoe Prosperity Center
- Tahoe Regional Planning Agency
- Tahoe Transportation District
- The Mountain Pact
- Valley Vision
- Washoe Tribe of Nevada and California
- Water Districts and Agencies



Public Involvement



Public Involvement Activities

Requirement:

1. Provide two opportunities for public comment on the plan during **drafting stage** and **prior to approval**
2. Include an opportunity for neighboring communities, local and regional agencies (that regulate development), businesses, academia, and other private and non-profit interests to be involved
3. Discuss how the community will continue public participation in the plan maintenance process.

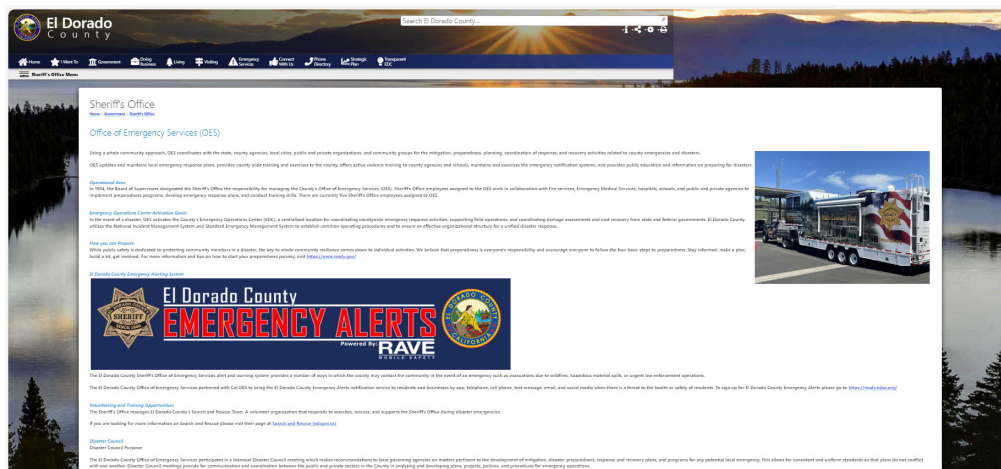
Proposed Activities

- County MJHMP Webpage: <https://www.eldoradoes.com/>
- Online Survey: <https://forms.office.com/e/Zs0At0cM9e>
- Two Public Workshops
- Press Releases & Social Media Posts
- Draft plan for public review with online feedback form



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El Dorado County MJHMP Webpage



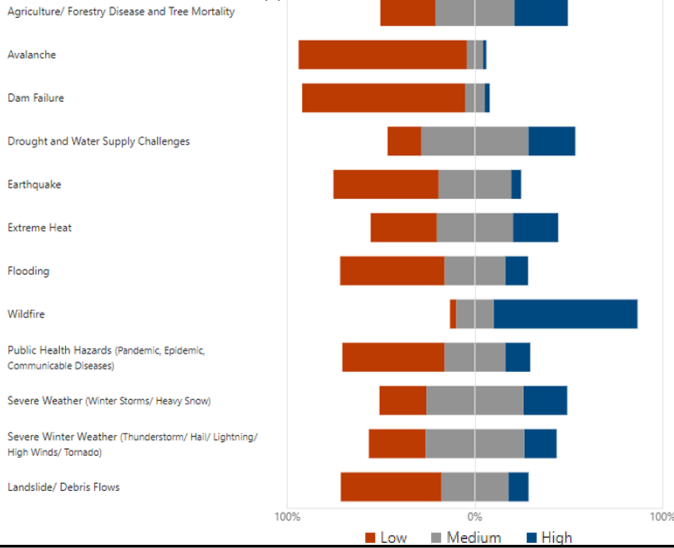
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What we heard from the Public Survey

The hazards addressed in the Hazard Mitigation Plan update are listed below. Please indicate the level of significance (low, medium, or high) you perceive for each hazard for in the community you live.



Have you experience a disaster or emergency that required you to evacuate your home or shelter in place (such as a flood, extreme winter weather, or wildfire)?

● Yes
● No



Do you have home insurance? (Select all that apply)

● Fire
● Flood
● Earthquake
● No Insurance



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slido



How can we improve community awareness and preparedness of natural disasters such as earthquakes, floods, or wildfires?

① Start presenting to display the poll results on this slide.

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Planning Process Overview



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Mitigation Planning Process



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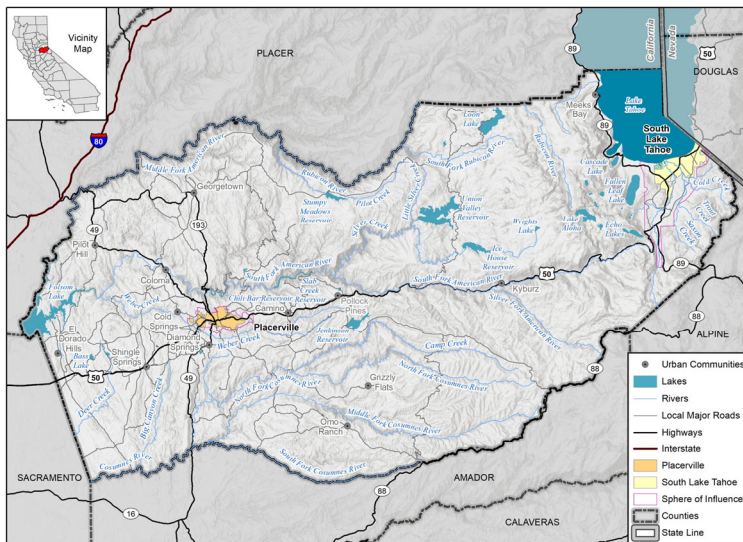


Phase 1: Organize Resources

- Determine Planning Area
- Establish the Hazard Mitigation Planning Team
- Create an Outreach Strategy to plan for Public Involvement
- Coordinate with other Stakeholders
- Review Community Capabilities
- Obtain Community Commitment to Mitigation



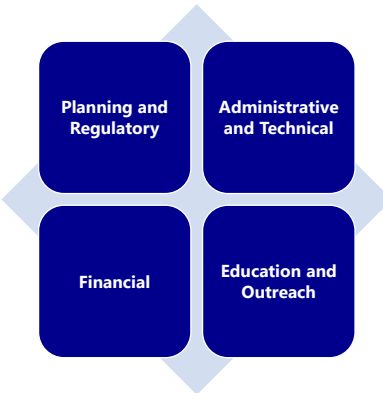
Determine the Planning Area and Resources



Review of Community Capabilities

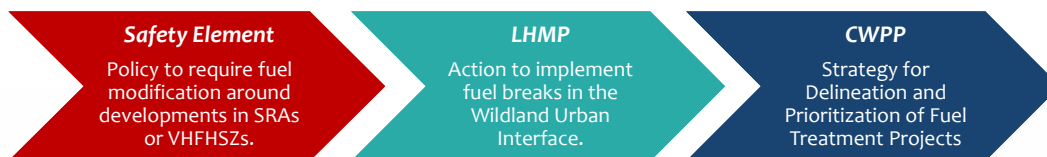
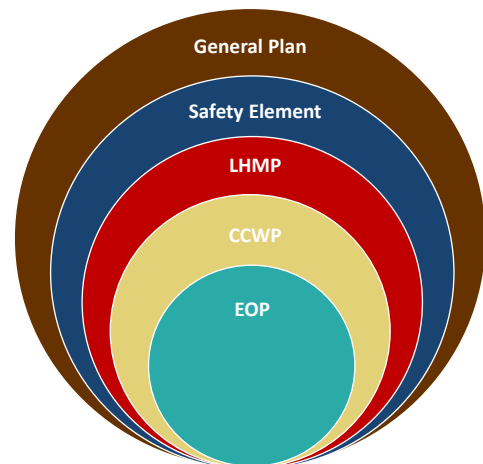
What's already in place related to hazard mitigation?

- Conduct an inventory of communities' existing and proposed policies, programs, and ordinances that may affect its vulnerability to hazards
 - ✓ 2004 General Plan (through 2019 amendments)
 - ✓ 2023 Draft Safety Element Update (in progress)
 - ✓ 2019 El Dorado County Local Hazard Mitigation Plan (LHMP)
 - ✓ 2022 Western El Dorado County Community Wildfire Protection Plan (CWPP)
 - ✓ 2024 Lake Tahoe CWPP (in progress)
 - ✓ 2023 Office of Wildfire Preparedness and Resilience (OWPR) Wildfire Strategy
 - ✓ 2023 Greater Placerville Wildfire Evacuation Preparedness, Community Safety, and Resiliency Plan
 - ✓ 2023 El Dorado Emergency Operations Plan
- Determine the communities' technical & fiscal abilities to implement mitigation initiatives. Include ability to attract and leverage funding.
- Consider opportunities to enhance or supplement these capabilities.



Plan Integration

- Housing Element (2021)
- Safety Element (2023)
 - Climate Vulnerability Assessment
- LHMP (2019, 2024 Update in Progress)
- Community Wildfire Protection Plans
 - West Slope CWPP (2022)
 - Tahoe Basin CWPP (Update 2023-2024)
- Emergency Operations Plan (2023)



Terminology

- **Hazard:** Act or phenomenon with potential to do harm
- **Vulnerability:** Susceptibility to harm, damage, loss
- **Exposure:** People, property, systems or functions that could be lost to a hazard
- **Risk:** Combines hazard, vulnerability, exposure and probability
- **Mitigation:** Actions taken in advance of a hazard's impact that reduce its severity

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Phase 2: Conduct a Risk Assessment

1. Identify and describe hazards
2. Identify assets
3. Assess risk
4. Summarize vulnerability



wsp

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slido



What assets do you consider important to protect from various potential hazards and hazard events?

① Start presenting to display the poll results on this slide.

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Risk Assessment: Hazard Profiles

Hazard/Problem Description

- Area, Seasonal Patterns, Speed of Onset/Duration

Geographic Location

- *Limited*: Less than 10% of Planning Area
- *Significant*: 10-50% of Planning Area
- *Extensive*: 50-100% of Planning Area

Past Occurrences

- Information on Historical Incidents, Known Impacts

Extent (Magnitude/Severity)

- *Catastrophic*: More than 50% of property severely damaged
- *Critical*: 25-50% of property severely damaged
- *Limited*: 10-25% of property severely damaged

- *Negligible*: Less than 10% of property severely damaged

Probability of Future Occurrences

- *Highly Likely*: Near 100% chance of occurrence in next year
- *Likely*: Between 10-100% chance of occurrence in next year
- *Occasional*: Between 1-10% chance of occurrence in next year
- *Unlikely*: Less than 1% chance of occurrence in next year

Significance

- *Low*: Minimal potential impact
- *Medium*: Moderate potential impact
- *High*: Widespread potential impact

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Hazard Identification

Has it Happened Before?

- Information Sources:
 - Existing County Mitigation Plan
 - Community Wildfire Protection Plans
 - State/Local/Tribal THIRAs
 - Past disaster declarations
 - Planning team/community members
 - Existing plans and reports
 - GIS-based maps and data
 - Internet websites and databases
 - Newspaper/historical records
 - Local, state, and federal experts



2022 Mosquito Fire



Recent Hazard Events in County: 1997-2023

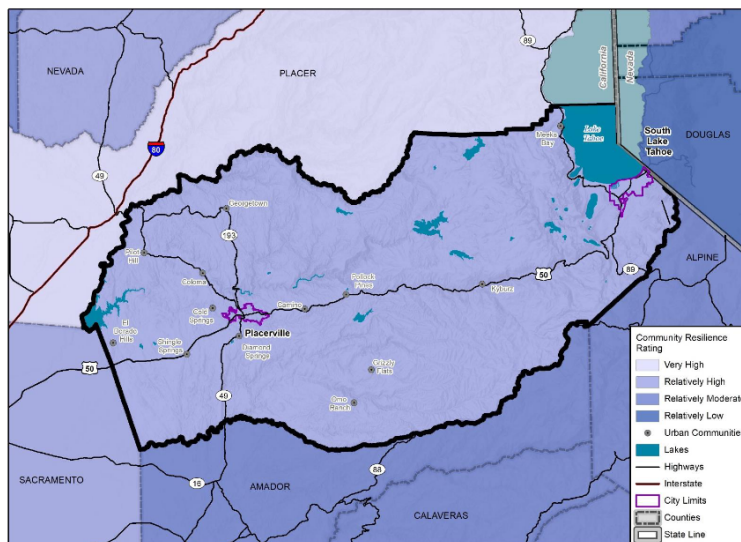
Name	Disaster #	Year	State Declaration	Federal Declaration	Location
Winter Storms	DR-1155	1997	Yes	N/A	El Dorado County
Hollow Fire	FM-2532	2000	Yes	N/A	El Dorado County
2005/06 Winter Storms	DR-1628	2005-2006	Yes	Yes	El Dorado County
2006 Spring Storms	DR-1646	2006	Yes	Yes	El Dorado County
Angora Fire	FM-2700	2007	Yes	Yes	Meyers, South Lake Tahoe
January Storms	2008-01	2008	Yes	N/A	El Dorado County
King Fire	FM-5081	2014	Yes	Yes	El Dorado and Siskiyou Counties
January 2017 Storms	DR-4301	2017	Yes	Yes	El Dorado County
Late January 2017 Storms	DR-4305	2017	Yes	Yes	El Dorado County
February 2017 Storms	DR-4308	2017	Yes	Yes	El Dorado County
Severe Winter Storms	DR-4434	2019	Yes	Yes	El Dorado County (+17 additional counties)
Covid-19	EM-3428	2020	Yes	Yes	Statewide
Covid-19	DR-4482	2020	Yes	Yes	Statewide
Caldor Fire	FM-5413	2021	Yes	Yes	El Dorado County
Caldor Fire	EM-3571	2021	Yes	Yes	El Dorado County (+3 additional counties)
Wildfires	DR-4619	2021	Yes	Yes	El Dorado and Lake Counties
Mosquito Fire	FM-5453	2022	Yes	Yes	El Dorado and Placer Counties
Flood	EM-3591	2023	Yes	Yes	El Dorado County (+40 additional counties)
Flood	DR-4683	2023	Yes	Yes	El Dorado County (+43 additional counties)
Flood	EM-3592	2023	Yes	Yes	El Dorado County (+42 additional counties)
Severe Winter Storms	DR-4699	2023	Yes	Yes	El Dorado County (+45 additional counties)

Hazards Review: Hazards of Potential Concern

- Avalanche
- Dam Failure
- Debris Flow and Landslide
- Drought and Water Shortage
- Earthquake
- Erosion
- **Extreme Heat**
- Floods (100/500-Year)
- Seiche (Lake Tsunami)
- Subsidence
- Severe Weather: Thunderstorms, Hail, Lightning, and Heavy Rain
- Severe Weather: Tornadoes and High Wind
- Severe Weather: Heavy Snow and Winter Storms
- Wildfire

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FEMA National Risk Index: Community Resilience



<https://www.fema.gov/flood-maps/products-tools/national-risk-index>



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Risk Assessment: Climate Change Considerations

- Addressed under each hazard profile as a factor intensifying impacts
- Discussion covers exposure (how climate change will impact the County and each jurisdiction)
- Risk and Onset (how likely are the impacts and how quickly will they occur)
- Assessment is focused on existing available studies and datasets
- Adaptive Capacity (what can be done?)



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Risk Assessment: Vulnerability Assessment

- Inventory of residential and commercial structures
- Parcel-level assessment (Assessor's data, general property)
- Inventory of County-owned critical facilities by FEMA's Community Lifelines
- Determine value of structures
- Determine the number of people in hazard areas
- Identify vulnerable infrastructure
- Identify development trends / constraints
- Identify historic, cultural, and natural resource areas
- Estimate losses

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Hazard Risk Summary

Hazard	County	City of Placerville	Georgetown Divide PUD	Cameron Park CSD	Office of Education
Avalanche	Medium	Low	Medium	Low	Medium
Dam Failure	High	Medium	High	Medium	Medium
Drought	High	Medium	Medium	Medium	Low
Debris Flow and Landslide	Medium	Low	High	Low	Medium
Earthquake	Medium	Low	Low	Low	Medium
Erosion	Low	Low	Low	Low	Low
Extreme Heat	Medium	Low	Medium	Medium	High
Flood	Medium	Medium	Low	Medium	Medium
Seiche (Lake Tsunami)	High	Low	Low	Low	Low
Thunderstorms, Hail, Lightning, and Heavy Rain	Medium	Medium	Medium	Medium	Medium
Tornadoes and High Wind	Medium	Low	Low	Low	Low
Heavy Snow and Winter Storms	High	Low	Low	Low	Medium
Subsidence	Low	Low	Low	Low	Low
Wildfire	High	High	High	Medium	High

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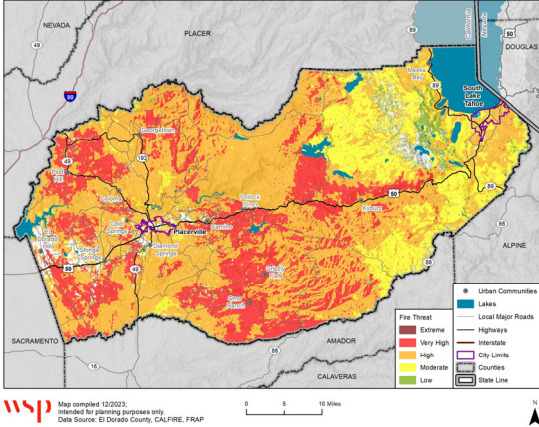
Do you agree with these ratings? Is there something we missed? Is there anything we should change?

① Start presenting to display the poll results on this slide.

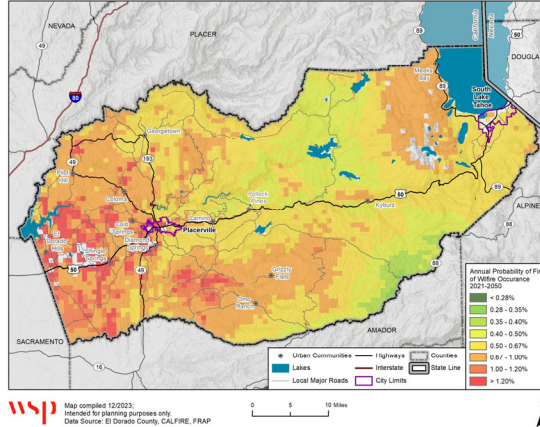
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Example: Wildfire

El Dorado County Wildfire Threat Areas



El Dorado County Annual Probability of Fire, 2021 – 2050



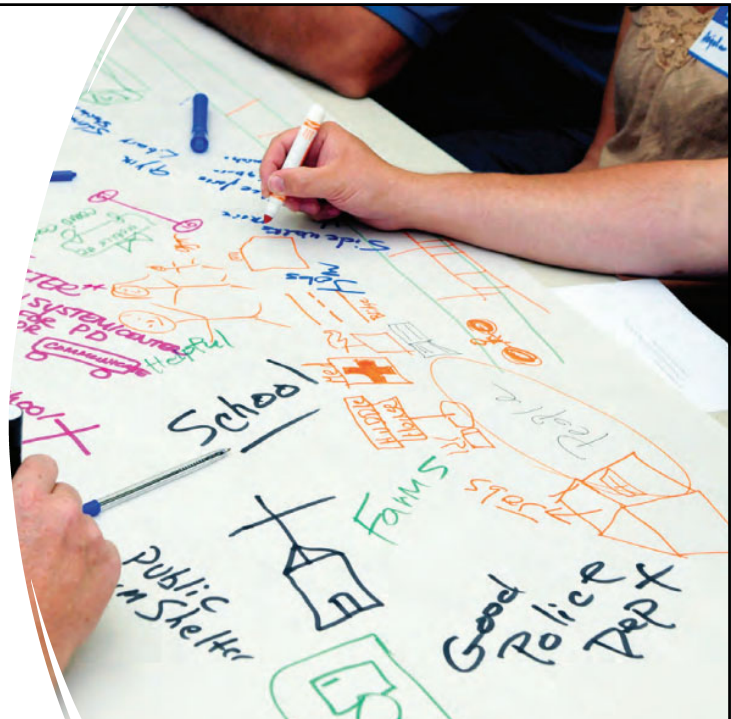
JURISDICTION	TOTAL PARCEL COUNT	IMPROVED VALUE	ESTIMATED CONTENT VALUE	TOTAL VALUE	POPULATION
Placerville	571	\$159,092,470	\$3,074,310	242,166,780	1,227
Unincorporated	37,549	\$11,759,094,566	\$6,108,732,220	\$17,867,826,786	92,376
Total	38,120	\$11,918,187,036	\$6,191,806,530	\$18,109,993,566	93,602

Area	Likelihood	Magnitude	Significance
Extensive	Highly Likely	Critical	High

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Phase 3: Develop a Mitigation Strategy

- Review & Update Plan goals & Objectives
- Review Mitigation Alternatives
- Draft an Action Plan



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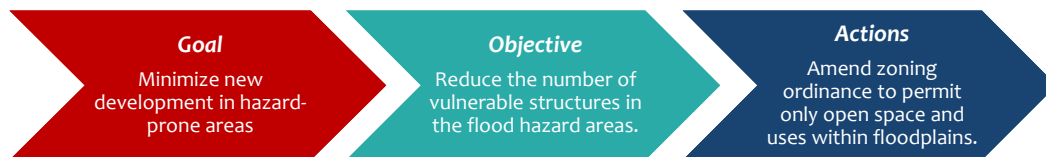
Develop Mitigation Goals

Should reflect the Risk Assessment

- Areas of high vulnerability
 - Estimated losses
 - At-risk existing facilities
 - At-risk critical facilities
 - At-risk cultural and natural resources
- Link with related goals from other existing plans
- Reduce losses to existing and future development

Considerations

Objectives (optional)



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Mitigation Goals: 2019 El Dorado County LHMP

Goal 1 – Minimize risk and vulnerability of El Dorado County to the impacts of natural hazards; protect lives, public health and safety; and reduce damages and losses to property, economy, and the environment.

Goal 2 – Provide protection for critical facilities, infrastructure, utilities and services from hazard impacts.

Goal 3 – Improve public awareness, education, and preparedness for all hazards.

Goal 4 – Increase communities' capabilities to mitigate losses and to be prepared for, respond to, and recover from a disaster event.

Goal 5 – Maintain FEMA Eligibility/Position the communities for grant funding.



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Categories of Mitigation Actions

- Plans and Regulations
- Structure and Infrastructure Projects
- Education and Awareness
- Natural Systems Protection

Actions must be prioritized



Funding Sources: FEMA Mitigation Grants

High Hazard Potential Dam (HHPD) Program

- Pre-Disaster
- Annual appropriation
- Used to repair, rehabilitate or remove high hazard dams
- Federally-owned dams are NOT eligible
- Local match varies

HMA Program Comparison



HMGP
Hazard Mitigation Grant Program



HMGP Post Fire
Hazard Mitigation Grant Program Post Fire



BRIC
Building Resilient Infrastructure and Communities



FMA
Flood Mitigation Assistance Program

Program type	Post-Disaster	Post-Disaster	Pre-Disaster	Pre-Disaster
Funding Availability	Presidentially declared disaster	FMAG declared disaster	6% set-aside from federal post-disaster grant funding	Annual appropriations
Competitive?	X	X	✓	✓
Eligible Applicants	States, federally-recognized tribes, territories, and DC	States, federally-recognized tribes, territories, and DC	States, federally-recognized tribes, territories, and DC	States, federally-recognized tribes, territories, and DC
Eligible Subapplicants	State agencies, local governments, tribes and PNP organizations	State agencies, local governments, tribes and PNP organizations	State agencies, local governments, and tribes	State agencies, local governments, and tribes
Hazard Mitigation Plan Requirement	✓	✓	✓	✓
NFIP Participation	Communities with projects in SFHAs	Communities with projects in SFHAs	Communities with projects in SFHAs	Subapplicants and properties



Phase 4: Plan Implementation & Maintenance

Keep the Plan Current

- Plan maintenance procedures
- Continue public involvement

Review and Adopt the Plan

- HMPC & Local Planning Team (LPT) Review
- Public Review
- State and FEMA Plan Review
- Local government adoption

Create a Safe and Resilient Community

- Implementing the plan to achieve mitigation goals
- Securing funding and assistance



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Plan Layout

Base Plan Document (County Level)

- Introduction
- Planning Process
- County Profile
- Hazard Identification and Risk Assessment
- Mitigation Strategy
- Plan Maintenance Process
- Plan Adoption, Implementation and Maintenance

Jurisdictional Annexes

- Local Planning Team (LPT)
- Community Profile
 - Population Trends
 - Development Trends
- Hazard Identification and Risk Assessment
- Capabilities Assessment
- Mitigation Strategy
- Implementation

4 Drafts

1. Administrative HMPC
2. Public Review
3. Cal OES Review
4. FEMA Review



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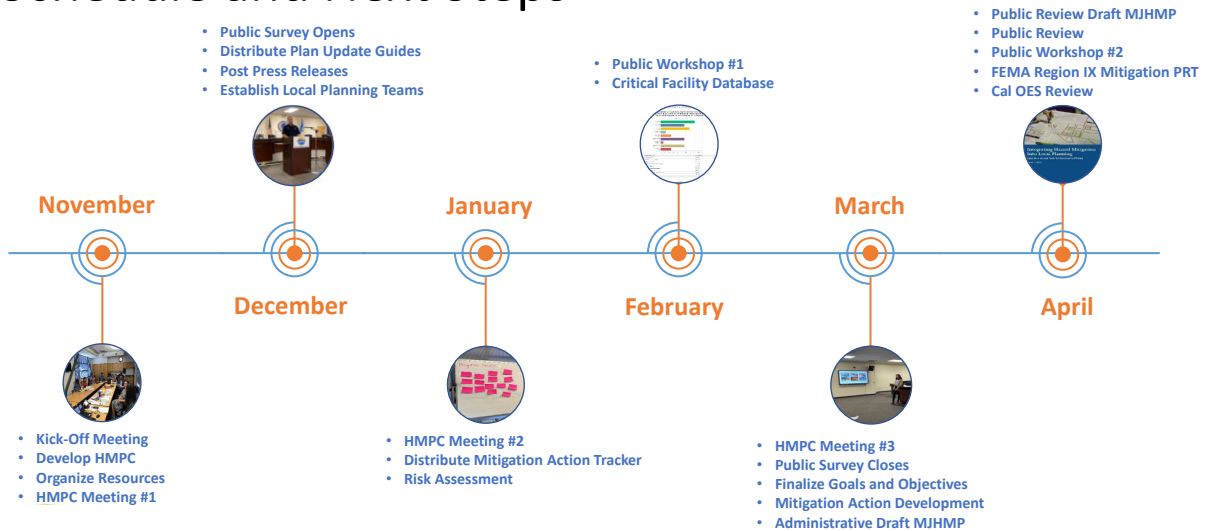
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Schedule and Next Steps



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Schedule and Next Steps



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Questions?

Project Manager
Scott Bare
El Dorado County Sheriff's Office
Office of Emergency Services
bares@edso.org

Project Manager
Juliana Prosperi AICP, LEED AP®, ENV SP
WSP USA Environment & Infrastructure
juliana.prosperi@wsp.com

