Tuolumne County Multi-Jurisdictional Hazard Mitigation Plan 2018

Annex M: Sonora Elementary School District

ANNEX M: SONORA ELEMENTARY SCHOOL DISTRICT

I. JURISDICTION PROFILE 4
II. PLANNING PROCESS 5
A. DMA 2000 Requirements 5
B. Plan Development and Public Input Process 6
C. Jurisdiction Specific Planning and Approval Process 6
III. RISK ASSESSMENT 7
A. DMA 2000 Requirements 7
B. Jurisdiction Specific Risks 7
C. Jurisdiction Specific Hazard Event History 8
D. Jurisdiction Specific Hazard Ranking 8
IV. VULNERABILITY ASSESSMENT 10
A. Overview 10
B. DMA 2000 Requirements 10
C. Critical Facilities and Infrastructure 11
D. Jurisdictional Assets at Risk to Applicable Hazards 11
E. Methodology Used 12
F. Loss Estimations 12
G. Development Trend Analysis 12
V. CAPABILITY ASSESSMENT 13
A. Legal and Regulatory 13
B. Administrative and Technical 13
C. Financial 13
D. Political Will of Community 13
VI. MITIGATION STRATEGY 14
A. DMA 2000 Requirements 14
B. 2013 Goals Progress Report 14
C. Goals, Objectives and Mitigation Actions 2018 15
D. How Mitigation Goals Address Buildings and Infrastructure 22

VII. MITIGATION ACTION IMPLEMENTATION 26
A. DMA 2000 Requirements 26
B. Prioritization of Mitigation Actions 26
C. Action Plan 27
D. Implementation through Existing Plans and Programs 31
E. Continued Public Involvement 32
F. Plan Maintenance, Updating and Evaluating 33
ACRONYMS 34
ADOPTION RESOLUTION 35

SONORA ELEMENTARY SCHOOL DISTRICT

I. JURISDICTION PROFILE

Founded in 1855 during California's Gold Rush, Sonora School has always been at the heart of Sonora's culture and community. Located in the Sierra Nevada foothills, near Yosemite National Park, the District strives to build respect and appreciation for the natural world and our students place in it. With a strong emphasis in the arts, science and technology, Sonora School has served as a model to schools across our region.

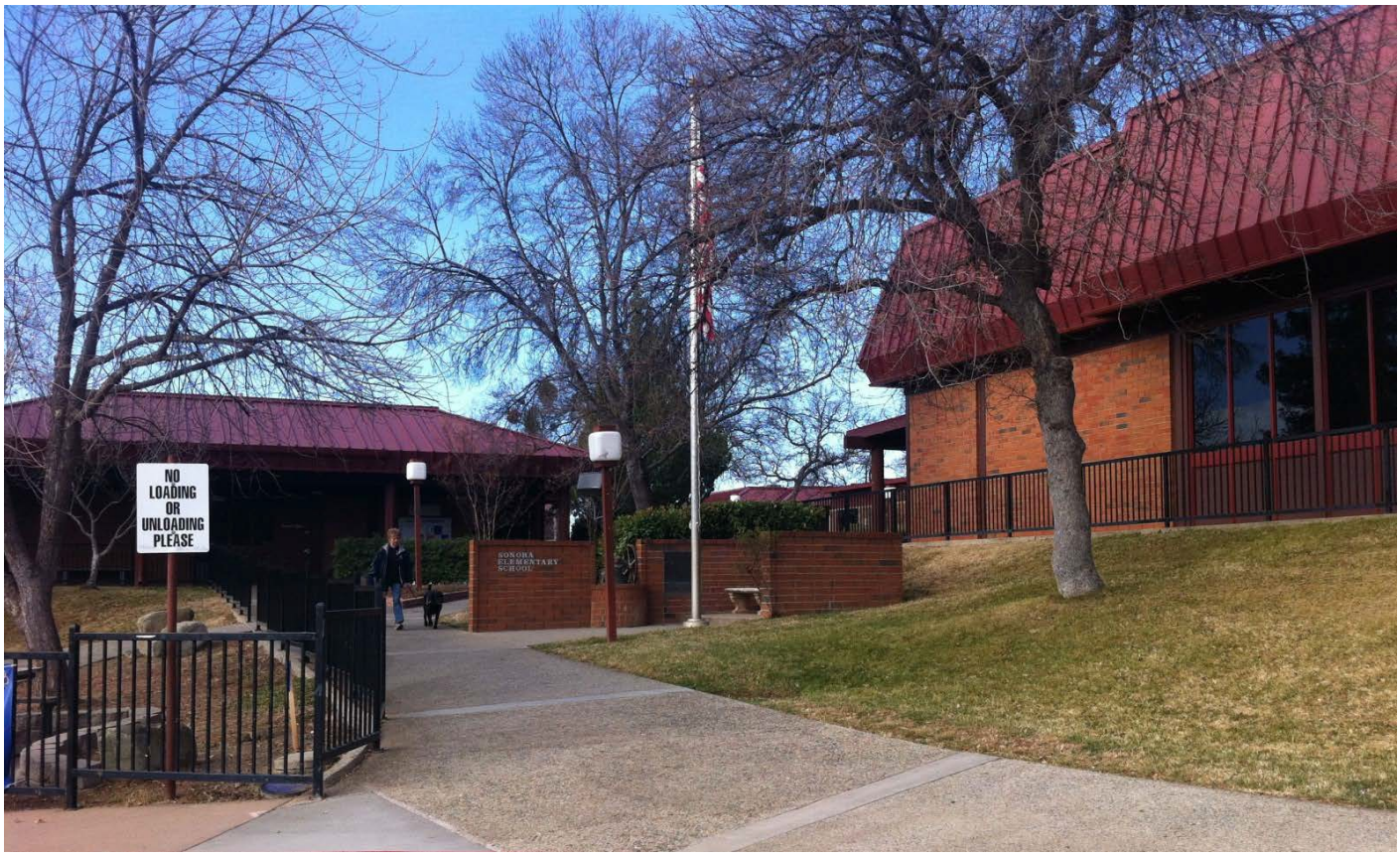
Sonora Elementary was originally constructed in 1973 and is comprised of 46 classrooms, 1 gym, 1 multipurpose room/cafeteria, 1 library, 1 staff lounge, 1 computer lab, and 3 playgrounds. Recent remodeling included modernizing two classroom portables. During the 2016-17 school years, approximately 735 K-8th grade students were enrolled at Sonora Elementary School, with classes arranged on a traditional schedule and calendar. The educational program focuses on the development of reading, writing, spelling, mathematics, science, social studies, music, art, health education, various electives, and physical education, based on the California curriculum standards and frameworks.

The Sonora Elementary School Mission Statement is:

We believe that the school experience should be safe, positive, and successful, while contributing to the physical, social, and mental well-being of the child.

We are committed to:

- Challenging all students to reach their full potential by encouraging natural curiosity and a love of learning.
- Promoting character development that emphasizes responsibility, self-discipline, compassion, honesty, integrity, and respect.
- Fostering parental involvement to maximize student success.
- Providing a balanced educational program, which includes fine arts, technology and physical fitness.
- Ensuring that staff has multiple opportunities for professional growth and development.



Sonora Elementary School

II. PLANNING PROCESS

A. DMA 2000 Requirements

DMA Requirements §201.6(b) and §201.6(c)(1):

An open public involvement process is essential to the development of an effective plan. In order to develop a more comprehensive approach to reducing the effects of natural disasters, the planning process shall include:

(1) An opportunity for the public to comment on the plan during the drafting stage and prior to plan approval;

(2) An opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia and other private and non-profit interests to be involved in the planning process; and

(3) Review and incorporation, if appropriate, of existing plans, studies, reports, and technical information.

The plan shall document the planning process used to develop the plan, including how it was prepared, who was involved in the process, and how the public was involved.

B. Plan Development and Public Input Process/Countywide Elements

Volume 1 is the master planning document which contains all elements applicable to the County of Tuolumne and each of the 22 individual jurisdictions. Plan development commenced with a review and revision of the updated 2013 Hazard Mitigation Plan. Each of the participating jurisdictions participated fully in the mitigation plan update.

A news release was developed and issued and informative letters were sent out to community groups and neighboring jurisdictions inviting public participation. A Hazard Mitigation Planning Group was constructed with representatives from all involved jurisdictions and community stakeholders. Planning group meetings were held which explained the process that was going to be taken to construct the new plan, reviewed hazards of concern and hazard rankings, and explained the risks and vulnerability to the communities' people, buildings and infrastructure. Mitigation goals, objectives and actions were discussed and reviewed thoroughly with all planning group members until concurrence was reached. A capability assessment and action plan were developed to ensure mitigation actions were realistic and attainable and to assign funding sources and responsibility for each proposed activity.

After the MJHMP Planning Group Members, their respective jurisdictions, and Tuolumne County Office of Emergency Services were all satisfied with the newly updated draft plan and its mitigation goal, objectives and actions, a noticed public hearing occurred at the County Board of Supervisor Chambers. This meeting was widely advertised both locally and in neighboring counties to provide an opportunity for the general public, bordering communities and regional agencies involved in hazard mitigation activities to participate in the planning process. Notice of the public hearing was posted, two weeks in advance, on the County website, community bulletin boards and through a press release. Notification letters were sent to Office of Emergency Services managers in all neighboring Counties. Several weeks prior to the hearing, the newly constructed Plan was posted on the County website to enable the public and stakeholders ample time to read and evaluate it. A Power Point presentation was developed that provided a detailed explanation of the risks and vulnerabilities the community faced.

The mitigation goals, objectives and actions were explained in detail as were the resources that would be used to help mitigate these hazards. In addition, the general public had an opportunity to ask questions and comment on the proposed plan and each of the annexes as they moved through the approval process for Tuolumne County and each of the participating jurisdictions. All comments were reviewed with the stakeholder group and incorporated into the plan as appropriate.

C. Jurisdiction Specific Planning and Approval Process

The Superintendent from the Sonora Elementary School District participated in the Hazard Mitigation Planning Group. He reviewed the findings which included concerns over wildland fire mitigations and frequent helicopter traffic to the neighboring hospital. The Superintendent's input was incorporated into

both draft and final documents, and reviewed by District staff. A staff report was prepared and made available to the general public for comment and was eventually forwarded to the School Board of Trustees. A public meeting was held within the jurisdiction; input was received from the general public and incorporated into the final approved agency specific plan.

Adoption by the School District demonstrates the jurisdiction's commitment to fulfilling the hazard mitigation goals and actions outlined in the plan. Adoption legitimizes the plan and authorizes the District to execute its responsibilities.

III. RISK ASSESSMENT

A. DMA 2000 Requirements

DMA Requirement §201.6(c)(2)(i):	The risk assessment shall include a description of the type of all natural hazards that can affect the jurisdiction.
DMA Requirement §201.6(c)(2)(i):	The risk assessment shall include a] description of the location and extent of all natural hazards that can affect the jurisdiction. The plan shall include information on previous occurrences of hazard events and on the probability of future hazard events.

Wildfire History

B. Jurisdiction Specific Hazard Event History

While a detailed hazard description and analysis can be found in the individual hazard profiles found in Volume 1 of this plan, as outlined below the District is susceptible to the following hazards.

Jurisdiction	Earthquake	Wildfire	Extreme Weather	Flood	Volcano	Haz Mat	Sinkholes
Sonora Elementary School District	✓	✓	✓		✓		✓

Hazard Specifics: Well-constructed, relatively new facilities with no flood threat. A wildland fire threat does exist. There is a large and continuous heavy fuel bed directly below the western portions of the campus. Building construction is mostly non-combustible and setbacks from fuel beds on the remaining

three sides are extensive (ball fields and parking lots). There is no flood threat to the District, although the County is an NFIP participant. The District has no flood control authority.

The school is adjacent to the helistop at Sonora Community Hospital. A concern has been raised regarding the frequent flights in and out of the area as helicopters often approach/depart directly over the school.

C. Jurisdiction Specific Hazard Event History

While a detailed hazard history can be found in the individual hazard profiles found in Volume 1 of this plan, the following events are specific to the District or have occurred in close proximity:

Earthquake History

Historically, earthquake activity in Tuolumne County is significantly below the California state average. In fact, it has one of the lowest earthquake risks in the State. As outlined below, a total of 5 historical earthquake events with recorded magnitudes of 3.5 or greater occurred in or near (50 Miles) Tuolumne County this past century.

Date	Description	Distance from Sonora	Impacts
March 26, 1872	7.6 – 8.0 Magnitude	Epicenter Unknown	Unknown
June 25, 1933	6.1 Magnitude	49.6 Miles	Unknown
June10, 1965	3.5 Magnitude	42.6 Miles	None
August 10, 1975	4.0 Magnitude	44.3 Miles	None
August 9, 1983	4.0 Magnitude	40.8 Miles	None

Wildfire History

Numerous small fires occur on an annual basis in and around the District. The weather, topography and fuels in the area make fire a constant threat for typically 6 months a year. While a detailed fire history for the entire county can be found in Volume 1 of this plan the following is a sample of fires that have occurred in this general vicinity and share similar fuel types, weather, and topography.

Date	Description	Impacts
August, 1987	Stanislaus Complex	6 major fires burn 145,950 acres, 28 structures, and 1 life was lost.

September, 2004 Tuolumne	Tuolumne Fire	750 Acres burned, 1 firefighter fatality
July, 2006	Pedro Fire	1997 Acres burned near Moccasin Power Plant & Hwy.
August, 2013	Rim Fire	257,314 acres burned 112 Structures destroyed

Extreme Weather History

Date	Description	Impacts
January – February 1969	Low elevation, heavy snow fall	Tree damage and transportation issues
November 2010	Freeze	Significant damage to apple and olive crops
March 2011	Winter Storm	Minor flooding and significant damage to structures caused by tree falls
January – February 2017	Winter Storm	Flooding caused damage to local roads and infrastructure and local landslides

Volcanic Activity

There is no history of volcanic activity in recorded history. The proximity to volcanic active areas does present a remote threat of ash fall and the associated respiratory illnesses.

Sinkholes

There is a poorly documented history of small sinkholes and subsidence as a result of mining activity
and the occurrence below ground of carbonated rock formations. There are no recorded events of significance.

D. Jurisdiction Specific Hazard Ranking

Given the past history, the current conditions, and the overall life and property threat to the Sonora Elementary School District the Planning Committee has deemed the probability and severity of each hazard as follows:

Sonora Elementary School District	Earthquake	Wildland Fire	Volcano	Extreme Weather	Sinkholes
Probability	L	H	L	M	L
Severity	H	M	M	L	L

L = Low, M= Medium, H = High

IV. VULNERABILITY ASSESSMENT

A. Overview

The vulnerability assessment is a summary of the hazard's impact to the District's vulnerable structures. District assets and development trends will be identified and assessed with respect to the developed hazard profiles to ascertain the potential amount of damage that could ensue from each identified hazard. This section will include: 1) A description of the critical buildings and infrastructure within the study areas including future building and land use decisions. 2) A general description of the extent of each hazard's impacts to these vulnerable structures, 3) An estimate of the potential dollar losses to vulnerable structures.

B. DMA 2000 Requirements

DMA Requirement §201.6(c)(2)(ii): The risk assessment shall include a description of the jurisdiction's vulnerability to the hazards described in paragraph (c)(2)(i) of this section. This description shall include an overall summary of each hazard and its impact on the community.

DMA Requirement §201.6(c)(2)(ii)(A): The plan should describe vulnerability in terms of the types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard areas.

DMA Requirement §201.6(c)(2)(ii)(B): The plan should describe vulnerability in terms of an estimate of the potential dollar losses to vulnerable structures identified in paragraph (c)(2)(i)(A) of this section and a description of the methodology used to prepare the estimate.

DMA Requirement §201.6(c)(2)(ii)(C):	The plan should describe vulnerability in terms of providing a general description of land uses and development trends within the community so that mitigation options can be considered in future land decisions.
DMA Requirement §201.6(c)(2)(iii):	For multi-jurisdictional plans, the risk assessment must assess each jurisdiction's risks where they vary from the risks facing the entire planning area.

C. Critical Facilities and Infrastructure

Critical facilities and infrastructure are those systems within each community whose incapacity or destruction would have a debilitating effect on the community's ability to recover subsequent to a major disaster. The following critical facility and infrastructure are categorized as follows:

1. **Emergency Services** for the health and welfare of the whole population (e.g., hospitals, police, fire stations, emergency operations centers, evacuation shelters, schools).

2. **Lifeline Utility Systems** such as potable water, wastewater, oil, natural gas, electric power and communications systems.

3. **Transportation Systems** including railways, highways, waterways, airways and city streets to enable effective movement of services, goods and people.

4. **High Potential Loss Facilities** such as power plants, dams and levees.

D. Jurisdictional Assets at Risk to Applicable Hazards

Critical Facilities and Infrastructure	Address	Building Value	Flood	Earthquake	Landslides/ Sinkholes	Volcano	Extreme Weather	Wildfire	Hazardous Materials
Sonora Elementary School	830 Greenly Rd. Sonora, CA 95370	$11,540,000		✓	✓	✓	✓	✓	

E. Methodology Used

To determine the number of critical structures and infrastructure at risk, a combination of field surveys, aerial photos, GIS maps, and Google Earth software were used. The methodology used in preparing the Vulnerability Estimate consisted of determining the value of critical buildings and facilities from insurance property schedules. Critical infrastructure values were established by using actual replacement costs which were determined by recent comparable replacement projects.

F. Loss Estimations

Dollar losses to buildings and infrastructure vary depending upon the natural hazard occurring and the severity of the hazard. In general, earthquakes can extensively damage a wide area therefore critical structure and infrastructure losses should be estimated at a 100% value. Destruction from flooding takes place in specific areas and the damage is historically less severe than that of an earthquake. Thus, the estimated loss as a result of flooding should be calculated at the 50% level. Damage resulting from wildfires should be calculated at 25% of structural value for those structures located within 300 feet of the wildfire areas. Extreme weather could impact any portion of the jurisdiction. Historical data indicates that these events are extremely localized and a 10% loss should be anticipated.

G. Development Trend Analysis

While the population of Tuolumne County is not expected to grow moderately in the next five years, there are Land Use policies and elements within the County General Plan to help assure orderly development when it does occur. No significant development changes have occurred since the initial Plan was developed.

In addition, the Local Agency Formation Commission (LAFCO) of Tuolumne County is tasked with the mission to provide an orderly pattern of growth that reconciles the varied needs of the County. One of the fundamental principles of LAFCO is to ensure the establishment of an appropriate and logical municipal government structure for the distribution of efficient ad appropriate public services. LAFCO Land Use Objectives include:

- The discouragement of urban sprawl
- Preservation of the physical and economic integrity of agricultural lands
- Preservation of open space within urban development patterns
- Orderly formation and development of agencies by shaping local agency boundaries
- The minimization of agencies providing services to a given area
- Utilization of Spheres of Influence to guide future development of agency boundaries.

V. CAPABILITY ASSESSMENT

The following resources are available to the jurisdiction in order to mitigation the effects of the identified hazards:

A. Legal and Regulatory

While the District has a legal responsibility to protect the welfare of its students and staff, it is not considered to be a mitigation enforcement agency and therefore has limited legal authority for the implementation of mitigation programs, policies and actions. The District falls under the regulatory ordinances enacted and enforced by the Federal, State, County agencies and relies on the County for legal authority in Land Use and Planning matters.

The District has developed and adopted a Comprehensive School Safety Plan as required by Section 8607 of the Government Code and complies with requirements of the California Administration Code, Title V, Education Code 560 regarding written civil defense and disaster preparedness.

B. Administrative and Technical

The School District has competent and experienced administrative and technical staff. However, given the small size of the District, there are very limited staff resources available for mitigation planning/activities. As a result, the District relies heavily on Tuolumne County emergency response personnel, engineers, building and safety inspectors, and other technical experts to assist with mitigation efforts. The District also has the ability to contract with private firms to provide professional assistance in mitigation strategies.

C. Financial

In order to achieve the mitigation goals and objective, the District will need to rely on federal and state entitlements and grants. The District's general fund, due to ongoing cut backs, is severely limited and not available for hazard mitigation projects. The District has the necessary budgetary tools and practices in place to facilitate handling appropriate funds; however, as noted above, funding sources are severely limited.

D. Will of the Community

The School Board recognizes the need for promoting, planning and implementing hazard mitigation strategies. The reduction in potential effects from a natural disaster will prove to be a tangible result of such planning and is consistent with the overall mission of the District. Efforts to secure funding for well thought out hazard mitigation projects and the administrative support necessary to see projects through to completion will undoubtedly be supported by the Board and community at large.

VI. MITIGATION STRATEGY

A. DMA 2000 Requirements

DMA Requirement §201.6(c)(3)(i):	The hazard mitigation strategy shall include a description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards.
DMA Requirement §201.6(c)(3)(ii):	The mitigation strategy shall include a section that identifies and analyzes a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard, with particular emphasis on new and existing buildings and infrastructure.

B. 2013 Goals Progress Report

2013 Jurisdiction Specific Mitigation Actions	Progress Made
Working with Cal EMA, increase participation in earthquake preparedness activities such as the annual Great California Shake-Out drill	Sonora Elementary School District practiced an earthquake drill on the day of the Great Shake-out drill.
Educate community members on the dangers associated with household hazardous materials including proper storage techniques	Sonora Elementary School District has trained their staff on hazardous chemicals.

C. Goals, Objectives and Mitigation Actions 2018

Goal 1 **Promote understanding and support for hazard mitigation by key stakeholders and the public within Tuolumne County.**

Applies to: All jurisdictions

Objective 1 Educate key stakeholders and the public to increase awareness of hazards and opportunities for mitigating hazards.

Mitigation Action 1A: Through newsletters, advertisements, speaking engagements and other public contacts, educate the general public and key stakeholders on the issues, responsibilities, and current efforts and successes in the area of disaster preparedness as they impact each agency.

Mitigation Action 1B: Conduct periodic workshops and promotion of the Emergency Notification Systems available to the public to ensure familiarity of the public to warning applications.

Goal 2 **Ensure that future development is protected from natural disasters.**

Applies to: Tuolumne County, City of Sonora, Tuolumne Band of Me-Wuk Indians, and the Tuolumne Utilities District.

Objective 2 Limit new development in hazardous areas, and as permissible, build to standards that will prevent or reduce damage.

Mitigation Action 2A: Educate the County and City planning staffs, administrative staffs and elected officials on the importance of keeping current on trends and developments in disaster preparedness.

Mitigation Action 2B: Encourage planning staffs to attend seminars and lectures on naturally occurring hazards so that they may better assist the appropriate governing bodies as they process future developments.

Mitigation Action 2C: In order to better protect life and property, continue to develop a more accurate and comprehensive series of countywide

GIS geology, fire, and flood maps and data sets.

Goal 3 **Build and support local capacity and commitment to minimize the jurisdictions within Tuolumne County's vulnerability to potential hazards.**

Applies to: All jurisdiction**s**

Objective 3.1 Improve existing capabilities to manage emergency situations.

Objective 3.2 Enhance the safety of residents, students and staff within the community and jurisdictions.

Objective 3.3: Enhance the communications between agencies to support emergency response

Mitigation Action 3.1A: In order to ensure that employees are available to assist during a major emergency, develop and adopt a Family Support Plan for all jurisdictions and County agencies.

Mitigation Action 3.1B: Review and when necessary, update the jurisdiction's Emergency Operations Plans and supporting documents

Mitigation Action 3.1C: Assist with Public Health Emergency Preparedness to plan and prepare for medical and healthcare impacts which would result from all hazards within the County

Mitigation Action 3.2A: Review the initial planning requirements and research the development of standard operating procedures which would minimize helicopter operations over Sonora Elementary School as they utilize the helistop at Sonora Regional Medical Center

Mitigation Action 3.2B: Support the efforts of the Tuolumne Utilities District to better protect public health by initiating a Watershed Sanitary Survey

Mitigation Action 3.2C: Assist the County in identifying opportunities for additional evacuation routes within single-access areas

Mitigation Action 3.2D: TUD will study and seek funding to increase the raw water storage or establish a secure conveyance from Lyons Reservoir to ensure service for both domestic consumption and urban fire protection

Mitigation Action 3.2E: Make improvements to wastewater systems by replacing or relining collection pipes so as to reduce sewer overflows and limit inflow and infiltration subsequently reducing the public

health threat.

Mitigation Action 3.2F: Develop a program that would, in emergency situations, enable water districts and water companies to share water resources through interconnections

Mitigation Action 3.2G: Develop a program to secure water rights for Tuolumne County

Mitigation Action 3.2H: Promote a county-wide sewer connection to reduce septic failure impacts and improve water quality.

Mitigation Action 3.2I: Promote land use recommendations that new developments occur adjacent to public water and wastewater facilities.

Mitigation Action 3.3: Build and maintain communications between County agencies, Special Districts, and the Tuolumne Band of Me-Wuk Indians to assist in the response to emergencies

Goal 4 Minimize the level of damage and losses to people, existing and future critical facilities and infrastructure due to flooding.

Applies to: Tuolumne County, City of Sonora, Curtis Creek School District, Belleview School District

Objective 4 Enhance the ability of community assets, particularly critical facilities, located in the 100-year floodplain to handle existing and projected flood levels

Mitigation Action 4A: Work to improve localized flood prone areas through a combination of vegetation management and storm drain improvements. (i.e. Sonora, Curtis, Sullivan, and Woods Creeks)

Mitigation Action 4B: Maintain compliance with the National Flood Insurance Program (NFIP) requirements.

Mitigation Action 4C: Through the Development Process Review team, restrict construction of essential service facilities in the 100-year flood plain.

Mitigation Action 4D: In order to better protect life and property, record a notice on properties located in flood zones utilizing FIRM maps and notify property owners of said action.

Mitigation Action 4E: Continue to work cooperatively with the state and federal flood related agencies for funding improvements through grant and agency programs.

Mitigation Action 4F: Seek funding sources for and initiate watershed improvement projects for the County.

Mitigation Action 4G: Study ways to improve drainage to prevent erosion on the steep slopes of the Curtis Creek campus and seek funding sources for mitigation.

Mitigation Action 4H: Study ways to improve drainage to prevent erosion on the steep slopes of the Belleview School campus and seek funding sources for mitigation.

Mitigation Action 4I: Work with Belleview School to identify and evaluate opportunities to create additional evacuation routes within the single-access areas in the district.

Goal 5 Minimize the level of damage and losses to people, existing and future critical facilities and infrastructure due to wildland fires.

Applies to: All Jurisdictions

Objective 5.1 Continue the comprehensive approach to reducing the level of damage and losses due to wildland fires through vegetation management, code enforcement, GIS mapping, and planning process.

Objective 5.2 Enhance collaboration amongst all fire agencies and stakeholders.

Mitigation Action 5.1A: In order to assist fire prevention efforts and to better manage large fires when they occur, continue to improve GIS mapping and tracking efforts by gathering and maintaining relevant GIS data layers and imagery and utilizing the best available mapping applications and software.

Mitigation Action 5.1B: Continue to work with the Hwy 108 Fire Safe Council, Yosemite Foothills FireSafe Council, and SWIFT to initiate fuel thinning and chipping projects in high priority areas. Collaborate with property owners and regulatory agencies in order to utilize prescribed fire on private and state owned lands in the county.

Mitigation Action 5.1C: Work with the Hwy 108 Fire Safe Council, Yosemite Foothills Fire Safe Council, and SWIFT to update as needed the Community Wildfire Protection Plans for the County so that they will continue to:

- Assess the fire hazard in the County
- Prioritize treatment areas
- Enhance collaboration amongst all fire agencies and stakeholders
- Streamline environmental review processes

Mitigation Action 5.1D: Improve water supply and storage for firefighting use at the Curtis Creek Campus.

Mitigation Action 5.1E: Develop a wildfire evacuation plan which includes sheltering in place at Curtis Creek School.

Mitigation Action 5.1F: Work with the Tuolumne Utilities District to improve fire flow, system reliability and redundancy, and increased water supply in their responsibility areas.

Mitigation Action 5.1G: Protect water conveyance system by reducing fuels adjacent to wooden flumes.

Mitigation Action 5.1H: Develop a County Fire Agency GIS layer showing fire water draft locations.

Mitigation Action 5.1I: Work with the Lake Don Pedro Community Services District to improve system reliability and redundancy, and increased water supply in their responsibility areas.

Mitigation Action 5.1J: Work with the Lake Don Pedro Community Services District and PG&E to improve the reliability of the electrical grid in Don Pedro and provide for emergency backup power supply to be used during power outages at critical water system facilities.

Mitigation Action 5.2A: Encourage participation of all Fire Agencies in the monthly Fire Chief Association meetings and support, when possible, efforts by the Association to improve fire protection and preventions efforts in the County.

Mitigation Action 5.2B: Encourage participation in cooperative automatic and mutual aid agreements between Districts, the County and the City of Sonora.

Goal 6 **Minimize the level of damage and losses to people, existing and future critical facilities and infrastructure due to geological events (earthquakes, volcanoes, landslides, and sinkholes).**

Applies to: All jurisdictions

Objective 6 Continue public education efforts so as to better prepare the citizens of Tuolumne County from the effects of a significant geological event

Mitigation Action 6A: Working with Cal OES, increase participation in earthquake preparedness activities such as the annual Great California Shake-Out drill

Mitigation Action 6B: Continue to support the work of utility districts in replacing sewer and water lines and portions of the flume that are the most vulnerable to an earthquake or landslide

Goal 7 **Limit risk to, and impacts from hazardous materials spills, intentional discharges, illegal disposals, transportation accidents, or system failures**

Applies to: All Jurisdictions

Objective 7.1 Continue efforts to manage the use, sale, distribution and disposal of hazardous materials in Tuolumne County

Objective 7.2 Improve emergency response efforts in the control and clean-up of accidental spills and releases

Mitigation Action 7.1A: Educate community members on the dangers associated with household hazardous materials including proper storage techniques

Mitigation Action 7.1B: Continue efforts to educate applicable employees on the handling, use, storage and disposal of hazardous materials utilized in the workplace

Mitigation Action 7.2A: In coordination with the Environmental Health Director, develop procedures to enhance the response to Hazardous Material

Incidents

Goal 8 **Minimize the level of damage and losses to people, existing and future infrastructure, and critical facilities due to extreme weather**

Applies to: All Jurisdictions

Objective 8.1 Continue the comprehensive approach to reducing the level of damage and losses due to extreme weather and drought through GIS mapping, planning process, and the removal of dead and dying trees.

Mitigation Action 8.1A: Analyze and remove hazards that threaten public safety due to the cascading effects of drought such as dry wells and tree mortality

Mitigation Action 8.1B: Encourage water agencies to conduct water supply evaluations for each public water system to determine the effect of drought on community water supply

Mitigation Action 8.1C: Work with the Lake Don Pedro Community Services District to improve the availability and reliability of Lake McClure pumping capacities at lower water surface elevations

Mitigation Action 8.1D: Work with the Lake Don Pedro Community Services District to increase groundwater supply and/or identify other alternate water sources to be used when drought and related reservoir operational requirements diminish the water supply available from Lake McClure

C. How Mitigation Goals Address Existing and New Buildings and Infrastructure

The following tables demonstrate how the proposed mitigation goals take into account both existing and new buildings and infrastructure.

MITIGATION GOALS	EXISTING BUILDINGS AND INFRASTRUCTURE						
	Electrical and Power Infrastructure	**Dams and Water Management**	**Communication Facilities**	**Critical Roads and Bridges**	**Essential Service Facilities (Fire, Law, Hospitals**	**Agricultural Infrastructure**	**Public Structures**
Goal 1-General Mitigation: Promote understanding and support for hazard mitigation by key stakeholders and the public within the County of Tuolumne.	X	X	X	X	X	X	X
Goal 2-General Mitigation: Ensure that future development is protected from natural disasters.	X	X	X	X	X	X	X
Goal 3-General Mitigation: Build and support local capacity and commitment to minimize the County of Tuolumne's vulnerability to potential hazards.		X		X	X	X	X
Goal 4-Flood: Minimize the level of damage and losses to people, existing and future critical facilities and infrastructure due to flooding.	X	X	X	X	X	X	X

Goal 5-Wildfire: Minimize the level of damage and losses to people, existing and future critical facilities and infrastructure due to wildfire.	X	**X**	**X**	**X**	**X**	**X**	**X**
Goal 6-Earthquake: Minimize the level of damage and losses to people, existing and future critical facilities and infrastructure due to earthquake, landslide and sinkholes.	**X**	**X**	**X**	**X**	**X**	**X**	**X**
Goal 7-Hazardous Materials: Limit risk to, and impacts from hazardous materials spills, intentional discharges, illegal disposals, transportation accidents, or system failures		**X**			**X**	**X**	**X**
Goal 8- Extreme Weather: Minimize the level of damage and losses to people, existing and future critical facilities, and infrastructure due to extreme weather.	**X**	**X**		**X**	**X**		**X**

MITIGATION GOALS	NEW PROJECTS/BUILDINGS AND INFRASTRUCTURE					
	Residential Subdivisions	**Various mixed use projects (residential and commercial)**	**Ag Clusters (residential, open space, and Ag uses)**	**Commercial and Industrial Projects**	**Essential Service Facilities**	**Public Structures**
Goal 1-General Mitigation: Promote understanding and support for hazard mitigation by key stakeholders and the public within the County of Tuolumne.	X	X	X	X	X	X
Goal 2-General Mitigation: Ensure that future development is protected from natural disasters.	X	X	X	X	X	X
Goal 3-General Mitigation: Build and support local capacity and commitment to minimize the County of Tuolumne's vulnerability to potential hazards.	X	X	X	X	X	X
Goal 4-Flood: Minimize the level of damage and losses to people, existing and future critical facilities and infrastructure due to flooding.	X	X	X	X	X	X

Goal 5-Wildfire: Minimize the level of damage and losses to people, existing and future critical facilities and infrastructure due to wildfire.	**X**	**X**	**X**	**X**	**X**	**X**
Goal 6-Earthquake: Minimize the level of damage and losses to people, existing and future critical facilities and infrastructure due to earthquake, landslide and sinkholes.	**X**	**X**	**X**	**X**	**X**	**X**
Goal 7-Hazardous Materials: Limit risk to, and impacts from hazardous materials spills, intentional discharges, illegal disposals, transportation accidents, or system failures	X	X	X	**X**	**X**	X
Goal 8- Extreme Weather: Minimize the level of damage and losses to people, existing and future critical facilities, and infrastructure due to extreme weather.	**X**	**X**			**X**	**X**

VII. MITIGATION ACTION IMPLEMENTATION

A. DMA 2000 Requirements:

DMA Requirement §201.6(c)(4)(i):	The plan maintenance process shall include a section describing the method and schedule of monitoring, evaluating, and updating the mitigation plan within a five-year cycle.
DMA Requirement §201.6(c)(4)(ii):	The plan shall include a process by which local governments incorporate the requirements of the mitigation plan into other planning mechanisms such as comprehensive or capital improvement plans, when appropriate.
DMA Requirement §201.6(c)(3)(iii):	The mitigation strategy section shall include an action plan describing how the actions identified in section (c)(3)(ii) will be prioritized, implemented, and administered by the local jurisdiction. Prioritization shall include a special emphasis on the extent to which benefits are maximized according to a cost benefit review of the proposed projects and their associated costs.
DMA Requirement §201.6(c)(3)(iv)	For multi-jurisdictional plans, there must be identifiable action items specific to the jurisdiction requesting FEMA approval or credit of the plan.

B. Prioritization of Mitigation Actions

The Mitigation actions were prioritized using a system which is outlined below. This system factored in the following components: 1) Probability of Occurrence 2) Effectiveness of Mitigation Actions, 3)Practicality of mitigation action for the jurisdiction based on the STAPLE+E criteria of Social, Technical, Administrative, Political, Legal, Economic and Environmental components. This gave rise to the development of an overall relative risk value that resulted in ratings of HIGH, MEDIUM and LOW for each of the mitigation actions. The resultant prioritization was presented to key stakeholders and lengthy discussions were held to ensure that the results were indeed applicable to the priorities and capabilities of the jurisdictions' served.

Sample Mitigation Action Prioritization Worksheet

Mitigation Action	Probability of Associated Threat Occurrence Low=1 Med.=2 High=3	Effectiveness of Mitigation Action Minimal=1 Moderate=2 High=3	Practicality (based on STAPLE+E criteria) Low=1 Medium=2 High=3	Relative Risk (Product of Risk Components)
1.A	3	2	3	18

In assessing and evaluating each strategy, the following factors were considered:

- The benefit justified the cost
- The availability of financial resources
- The availability of staff resources
- Impact on County department functions
- Strategies reflect the goals and objectives

C. Action Plan

Once the MJHMP has received formal adoption by the Board of Supervisors and the various governing bodies the following action plan, agreed upon by Hazard Mitigation Planning Group, will be used to ensure the Plan is implemented and remains an active and relevant document. Actual implementation may be dependent upon funding availability.

ACTION PLAN FOR TUOLUMNE COUNTY MULTI-JURISDICTIONAL PLAN

MITIGATION ACTION		IMPLEMENTATION STRATEGY			
ID	**DESCRIPTION**	**RESPONSIBLE DEPARTMENT**	**FUNDING SOURCES**	**TIME TO COMPLETE**	**PRIORITY**
1.A	Educate Public and Stakeholders	OES – lead All support	General Funds	Ongoing	Medium
1.B	Promote Everbridge	OES- lead All Support	None Required	Ongoing	Low
2.A	Educate Staff	OES – lead All support	None Required	Ongoing	Medium
2.B	Continuing Education	OES –lead All support	General Funds	Ongoing	Medium
2.C	Improve GIS Capabilities	County CRA, City of Sonora & CAL Fire	General Funds	36 Months	Medium
3.1A	Develop/ Adopt Family Support Plan	All agencies OES support	General Funds	12 Months	Medium
3.1B	Emergency Operations Plans	All agencies OES support	None Required	12 Months	Medium
3.1C	Medical Preparedness	Public Health-Lead	None Required	Ongoing	Medium
3.2A	Helicopter Operations	OES	None Required	Ongoing	Low
3.2B	Watershed Survey	TUD	Grant	12 Months	Medium
3.2C	Single Access Routes	Fire Safe Council and Community Resources	Grant and General Fund	36 Months	Medium
3.2D	Raw Water Storage	TUD	Grant	24 Months	Medium
3.2E	Wastewater System Improvements	TUD	General Fund & Grants	24 Months	High
3.2F	Water Interconnections	All water agencies	None Required	36 Months	Medium

3.2G	Water Rights	All water agencies	Grants & General Funds	Ongoing	Medium
3.2H	Promote Sewer Connection	Water Agencies with support of all agencies	None Required	Ongoing	Low
3.2I	Promote Development adjacent water facilities	Water Agencies with support of all agencies	None Required	Ongoing	Low
3.3	Maintain Communications	All agencies	None Required	Ongoing	Medium
4.A	Creek/Storm Drain Management	County CRA and City of Sonora	General Fund	Fall of each year	Low
4.B	NFIP Requirements	County CRA and City of Sonora	General Fund	Ongoing	Medium
4.C	Development Review	County CRA and City of Sonora	General Fund	Ongoing	Medium
4.D	Notice Property Owners	County CRA and City of Sonora	General Fund	24 Months	Medium
4.E	Storm Drain Improvements	County CRA and City of Sonora	Grants	Ongoing	Medium
4.F	County Watershed Projects	County CRA	Grants	36 Months	Medium
4.G	Drainage	Curtis Creek School District	Grants	24 Months	Medium
4.H	Drainage	Belleview School District	Grants	24 Months	Medium
4.I	Single Access Routes	Belleview School	Grants	24 Months	Medium
5.1A	Improve GIS Mapping and Tracking	CAL Fire-County Fire	General Fund	36 Months	Medium
5.1B	Fuel Thinning and Chipping Projects	All fire agencies	Grants	Ongoing	High
5.1C	Community Wildfire Protection Plan Update	CAL Fire-County Fire	General Fund	12 Months	Medium
5.1D	Improve Water Supply/ Storage at Curtis Creek School	Curtis Creek School District	Grants	24 Months	High

5.1E	Evacuation Plans for Curtis Creek	District Superintendent with fire agencies supporting	None Required	12 Months	High
5.1F	Water Supply/Fire Flow	TUD, with fire agencies supporting	General Funds and Grants	36 Months	High
5.1G	Protect Flumes	TUD, with fire agencies supporting	General Funds and Grants	Ongoing	Medium
5.1H	County Fire GIS Layer	County GIS- Lead OES- Support	General Funds	36 Months	Low
5.1I	Increase Water Supply for Lake Don Pedro CSD	Lake Don Pedro CSD- Lead OES-Support	General Funds and Grants	36 Months	Medium
5.1J	Increase Alternate Power Source for Lake Don Pedro	Lake Don Pedro CSD- Lead OES-Support	General Funds and Grants	24 Months	Medium
5.2A	Fire Chiefs Association	All fire agencies	None Required	Ongoing	Medium
5.2B	Mutual/Auto Aid	All fire agencies	None Required	Ongoing	Medium
6.A	Earthquake Preparedness Exercises	OES – lead All support	None Required	Fall of Each Year	Medium
6.B	Replace Vulnerable Water/Sewer Lines	TUD	General Fund	24 Months	Medium
7.1A	Educate Community on Hazardous Materials	OES – lead All support	None Required	Ongoing	Medium
7.1B	Educate Staff on Hazardous Materials	OES – lead All support	None Required	Ongoing	Medium

7.2A	Improve Response Capabilities	Environmental Health– lead fire agencies support	None Required	Ongoing	Medium
8.1A	Removal of safety hazards caused by dry wells and Tree Mortality	All Agencies	Grant	36 Months	High
8.1B	Water Supply Evaluation at Lake McClure	Lake Don Pedro CSD- Lead OES Support	Grant and General Fund	24 Months	Medium
8.1C	Improve Pumping Capacity at Lake McClure	Lake Don Pedro CSD- Lead OES Support	Grant and General Fund	24 Months	Medium
8.1D	Alternate Water Sources to Lake McClure	Lake Don Pedro CSD- Lead OES Support	Grant and General Fund	36 Months	Medium

D. Implementation Through Existing Plans and Programs

The general administrative oversight of this MJHMP rests with the Tuolumne County Office of Emergency Services. Tuolumne County currently uses comprehensive land use planning, capital improvements planning, and building codes to guide and control development within the County. This MJHMP will be provided to those responsible for the County's General Plan development mechanisms to ensure that consistency is maintained. The same holds true whenever substantive changes are made.

Specific Mitigation Actions have been assigned to this jurisdiction. These individual actions will fall under the general administrative oversight of the local governing body and will be incorporated into the existing Plans and Programs. Should technical expertise not be available in these agencies, the County Office of Emergency Services is committed to, when possible, coordinating the resources of the County to assist with implementation of the mitigation actions.

E. Continued Public Involvement

Tuolumne County and the District understand the importance of involving the public in the ongoing Hazard Mitigation Plan review and updating process. Resultantly, the following actions will be taken:

- A copy of the MJHMP will be posted on the County website and will direct the public on how to contact the County OES for consideration of future edits.

- Hard copies of the Plan will be available at the County Office of Emergency Services and the County Library

F. Plan Monitoring, Evaluating and Updating

DMA Requirement §201.6(d)(3): A local jurisdiction must review and revise its plan to reflect changes in development**,** progress in local mitigation efforts, and changes in priorities and resubmit if for approval within 5 years in order to continue to be eligible for mitigation project grant funding.

In order to continue to be an effective representation of each jurisdiction's overall strategy for reducing its risks from natural hazards, the mitigation plan must reflect current conditions. Monitoring and evaluating the plan will occur annually to make certain that the goals and objectives for the County and participating jurisdictions are current and mitigation activities are being carried out.

To ensure that regular review and update of this Multi-Jurisdictional Hazard Mitigation Plan takes place, the County Office of Emergency Services will communicate with the MJHMP Planning Group members annually to see if their plan components are up-to-date and meet current realities.

The MJHMP Planning Group will review each goal and objective to evaluate its:

- Relevance to current and evolving situations in Tuolumne County.
- Consistency with changes in local, state and federal policy.

The planning group will review the risk assessment component of the plan to ascertain if the information needs to be updated or modified. Each jurisdiction will report on:

- Current status of their mitigation actions
- How coordination efforts are proceeding
- Implementation processes that worked well
- Any difficulties encountered
- Any strategies in need of revision

If the plan review leads the Hazard Mitigation Planning Group to determine that modifications are necessary, then the County or the applicable jurisdiction can initiate a plan amendment.

Acronyms

Acronym	Definition
CGS	California Geological Survey
Cal EPA	California Environmental Protection Agency
Caltrans	California Department of Transportation
CAL Fire	California Department of Forestry and Fire Protection
CDF	California Department of Forestry and Fire Protection
CDHS	California Department of Health Services
CFR	Code of Federal Regulations
CGS	California Geological Survey
CISN	California Integrated Seismic Network
CSSC	California Seismic Safety Commission
DFG	State Department of Fish and Game
DHS	Department of Homeland Security
DWR	Department of Water Resources
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FMA	Flood Mitigation Assistance
FMP	Floodplain Management Plan
FRAP	Fire and Resource Assessment Program
GIS	Geographic Information System
HMGP	Hazard Mitigation Grant Program
LHMP	Local Hazard Mitigation Plan
NFIP	National Flood Insurance Program
NOAA	National Oceanic and Atmospheric Administration
NPS	National Park Services
OES	Governor’s Office of Emergency Services
SEMS	Standardized Emergency Management System
SFHA	Special Flood Hazard Area
USDA	U.S. Department of Agriculture
USGS	U.S. Geological Survey

Resolution to be received separately