



## Chapter 2 What's New

**44 CFR §201.6(d)(3) and §201.7(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 it for approval within 5 years in order to continue to be eligible for mitigation project grant funding.**

The previous 2018 Local Hazard Mitigation Plans (LHMP), being updated as part of this 2024 Colusa County LHMP Update, contained descriptions of planning processes, the risk assessments of identified hazards, and mitigation strategies for reducing the risk and vulnerability from these hazards. Since approval of the 2018 LHMP by FEMA, progress has been made on implementation of the 2018 mitigation strategies, as applicable to the respective participating jurisdictions. As part of this LHMP Update, a thorough review and update of the 2018 LHMP was conducted to ensure that this 2024 Colusa County LHMP Update reflects current conditions and priorities in order to realign the updated mitigation strategy for the forthcoming five-year planning period. This section of this LHMP Update includes the following:

- **What's New in the LHMP Update.** Section 2.1 provides an overview of the approach to updating the previous LHMPs and identifies new analyses, data and information included in this LHMP Update to reflect current community conditions. This includes a summary of new hazard and risk assessment data as it relates to the Colusa County Planning Area and participating jurisdictions as well as information on current and future development trends affecting hazard vulnerability and related issues. The actual updated data, discussions, and associated analyses are contained in their respective sections within this LHMP Update.
- **Summary of Significant Changes to Current Conditions, Planning Area Vulnerability, and Hazard Mitigation Program Priorities.** Section 2.2 provides a summary of significant changes in current conditions, changes in hazard vulnerability, and resulting modifications to the Colusa County hazard mitigation program priorities.
- **2018 Mitigation Strategy Status and Successes.** Section 2.3.2 provides a description of the status of mitigation actions from the 2018 LHMP and also indicates whether a project is no longer relevant or is recommended for inclusion in the updated mitigation strategy. This section also highlights key mitigation success stories since the 2018 LHMP.

This What's New section provides documentation of Colusa County Planning Area's progress or changes in risk and vulnerability to hazards and overall hazard mitigation programs. Completion of this LHMP Update further provides documentation of the participating jurisdictions to this Colusa County Planning Area's continued commitment and engagement in the hazard mitigation planning process.

### 2.1 What's New in the Plan Update

Preparing the 2024 LHMP Update involved a comprehensive review and update of each section of the 2018 LHMP and includes an assessment of the success of the participating jurisdictions in evaluating, monitoring, and implementing the mitigation strategy outlined in the 2018 LHMP. Only the information and data still valid from the 2018 LHMP was carried forward as applicable into this LHMP Update.

Also to be noted, Chapter 7 Implementation and Maintenance of this LHMP Update identifies key requirements for updating future plans:

- Consider changes in vulnerability due to action implementation of mitigation actions;
- Document success stories where mitigation actions have proven effective;
- Document areas where mitigation actions were not effective;
- Document any new hazards that may arise or were previously overlooked;
- Incorporate new data or studies on hazards and risks;
- Incorporate new capabilities or changes in capabilities;
- Incorporate growth and development-related changes to inventories; and
- Incorporate new recommended mitigation actions or changes in the prioritization of mitigation actions.

These requirements and others as detailed throughout this Plan were addressed during this LHMP Update process.

As part of the comprehensive review and update of each section of the LHMP Update, the participating jurisdictions recognized that updated data, if available, would enhance the analysis presented in the risk assessment and utilized in the development of the updated mitigation strategy. Highlights of new data used for this LHMP Update are identified below and also sourced in context within both the Chapter 4 Risk Assessment and the jurisdictional annexes. Sources of specific data used are also provided throughout this LHMP Update and included in Appendix D References. This new data and associated analysis contributed to the development of the updated risk assessment and mitigation strategy presented in Chapter 4 and Chapter 5 of this LHMP Update, as well as within the jurisdictional annexes to this Plan.

Highlights of new information and analyses contained in this LHMP Update includes the following:

- Disaster declarations were updated, including federal, state, and USDA disaster declarations. NCDC Storm Events and past historic hazard occurrences since the previous plans were added for each jurisdiction.
- A Local Concerns section was added to each jurisdiction's vulnerability assessment to capture local issues and to support the resulting mitigation strategy.
- Incorporation and analysis of the updated California Department of Finance population data was utilized for this LHMP Update.
- A detailed discussion of socially vulnerable and underserved populations were added to the Base Plan and to each jurisdictional annex.
- An updated critical facility GIS layer was provided by the County for the Colusa County Planning Area. This allowed for an updated analysis of critical facilities for each mapped hazard in the Colusa County Planning Area.
- Community lifelines were added to all hazard discussions.
- Development since the last plan was analyzed in detail for each jurisdiction.
- Future development was gathered from each jurisdiction and analyzed using the most recent hazard data. This was included in each participating jurisdiction's annex.
- A new section on Power Shortage/Failure was added. Public Safety Power Shutoff events were also added.

- Each section of the hazard profiles and vulnerability assessment looked at how at risk, underserved, and socially vulnerable populations could be affected by each hazard.
- Impacts of climate change, changes in population patterns, and changes in land use and development was reviewed and discussed for each hazard.
- Cal-Adapt and other state and local climate change data was added to the climate change section, as well as to other hazards that are exacerbated by climate change.
- New dam data provided by Cal OES and CA DSOD was used for the dam inventory and analysis. This data included an updated hazard classification for identified dams and updated inundation mapping. Assets at risk to dam inundation was analyzed. Critical facilities at risk to dams were tabulated.
- Additional Hazus runs were performed on two separate earthquake shake scenarios for the Colusa County Planning Area.
- New DFIRM data was used as it became available during this LHMP Update. The decertification of the levees put many additional residents and values into the 1% annual chance floodplain.
- Deep seated landslide data was added to the landslide hazard profile and vulnerability analysis. An analysis was performed on values at risk (including populations, structures, critical facilities, and future development).
- Levee failure was analyzed based on new data. All levees in the County were decertified. The County utilized Levee Flood Protection Zone (LFPZ) data for analysis. An analysis was performed on assets at risk (including populations, structures, critical facilities and community lifelines, and future development) in the LFPZs.
- Economic assets and community activities of value discussions were added to the vulnerability assessment of all hazards.
- To better meet the revised FEMA plan review tool, a more extensive analysis of the extents to identified hazards was conducted and included in this LHMP Update.
- A greater study of all jurisdiction's mitigation capabilities was added.
- Public outreach efforts were expanded to include an enhanced focus on education and outreach to vulnerable and underserved populations, including holding an additional Public Meeting on the LHMP Public Review Draft geared specifically towards local and regional providers of vulnerable populations.
- All previous mitigation actions were updated, and many new actions were added to this LHMP Update, including mitigation actions to address issues related to mitigation planning for vulnerable and underserved populations.

## 2.2 Summary of Significant Changes to Current Conditions, Planning Area Vulnerability, and Hazard Mitigation Priorities

This section provides a summary by hazard of significant changes in current conditions, Colusa County Planning Area vulnerabilities, and resulting modifications to the Colusa County participating jurisdictions' mitigation program priorities since the 2018 LHMP. As a result of this analysis of factors resulting in changes in community vulnerability since the last Plan, mitigation planning priorities were modified by participating jurisdictions as reflected in each jurisdictions updated lists of priority hazards of concern, updated LHMP goals and objectives, and an updated list and prioritization of mitigation actions and projects for this 2024 LHMP Update.

2024 LHMP Update Hazards	Decrease in Vulnerability	No Change in Vulnerability	Increase in Vulnerability
Agricultural Hazards: Severe Weather/Invasive Species (Pests/Plants)			X

- Recent drought conditions have stressed local crops and grazing lands making them more susceptible to insect infestation, severe weather events and other issues.
- Noxious weeds can be more drought tolerant – better able to compete for water over local crops and vegetation and also increases wildfire risk.
- Access and availability of water due to recent drought conditions impacts water supply for all uses, including agriculture.
- Successful crop production relies on predictable weather patterns. For example, walnuts are affected by extreme heat occurring at differing times; almonds are likewise affected by rain occurring at the wrong times.
- Transition from rice to trees has impacted the County’s agricultural industry. Trees are susceptible to new problems, such as squirrels, which create a public health issue. Trees, compared to rice, also increases the fire risk and can be an issue during periods of drought as they require more water.

2024 LHMP Update Hazards	Decrease in Vulnerability	No Change in Vulnerability	Increase in Vulnerability
Climate Change			X

- NWS data indicates temperatures are increasing resulting in more extreme heat days. Recent years (2021, 2022, 2023, 2024) have been some of the hottest years on record.
- Snowpack levels have been occurring at higher elevations in recent years.
- Weather extremes, including precipitation, have been increasing and becoming much more variable – the Colusa County Planning Area is seeing increased precipitation and intensity as well as abnormally dry conditions. Other examples of weather extremes include the numerous atmospheric river events that have occurred over the last several years.
- Changing climate conditions influence multiple hazards, such as heat, flooding, wildfire and others, identified in the Planning Area as described in this LHMP Update.
- Increased temperatures associated with climate change increases the use and costs of energy leaving critical systems and infrastructures more vulnerable.
- Other ongoing impacts include impacts to food sources and food-related diseases, eco-system changes, impacts to cultural resources, public health issues, etc.

2024 LHMP Update Hazards	Decrease in Vulnerability	No Change in Vulnerability	Increase in Vulnerability
Dam Failure		X	

- With more people moving into dam inundation areas, the vulnerability increases due to an increase in potentially affected populations, but not due to an increased risk of dam failure. However, population

growth in the last five years has been limited in Colusa County, thus not notably affecting dam vulnerability in the Planning Area.

- The risk of dam failure increases over the years due to aging dam infrastructure. However, dams are more regulated than ever, with requirements for Emergency Action Plans, inspections, and maintenance.

2024 LHMP Update Hazards	Decrease in Vulnerability	No Change in Vulnerability	Increase in Vulnerability
Drought and Water Shortage			X

- Recent drought conditions, including water supply issues, have had an impact on the Colusa County Planning Area and California. As a result, the drought hazard has become a significant priority for mitigation planning.
- State drought mandates, including conservations measures, to protect water supply throughout California have been implemented and continue within the Planning Area.
- Drought conditions have impacted the water supply to the Planning Area, as evidenced by the number of wells going dry.
- Drought conditions have contributed to an increase in tree mortality issues and a general increase in dry fuels and wildfire conditions.
- Noxious weeds are more drought tolerant – better able to compete for water over local vegetation
- Water quality issues have been more of an issue with less flows in streams, combined with drawing down of water tables. Further, dry wells are now dirty, sandy water; there is not as much ground water available to act as a filter to these water supply sources.

2024 LHMP Update Hazards	Decrease in Vulnerability	No Change in Vulnerability	Increase in Vulnerability
Earthquake		X	

- Overall, Colusa County is in a relatively low to moderate seismically active area.
- The primary factor that might change the earthquake vulnerability is additional development and more people moving to the area. However, adherence to California building codes should ensure sound development in new development areas.

2024 LHMP Update Hazards	Decrease in Vulnerability	No Change in Vulnerability	Increase in Vulnerability
Flood: 1%/0.2% events			X

- Overall, the net increase or decrease in vulnerability depends on the location within the Planning Area.
- The risk and vulnerability of 1% and 0.2% flood events remain somewhat constant, but are unpredictable, changing from year to year based on weather and new development in the Planning Area.
- Recent years of heavy rains, including atmospheric river events, resulted in full reservoirs and high rivers. This contributed to flooding around the County, including within identified FEMA floodplains.

- Land use planning, flood control measures, and adherence to development requirements in identified floodplains have minimized additional exposure to this hazard in the Planning Area, even in years of heavy storms.
- With the new DFIRMs effective in 2024, the levees in the Planning Area have all been decertified. This resulted in additional development and residents subject to the 1% annual chance flood and to NFIP insurance requirements.
- Flood insurance is becoming much more difficult to obtain with many insurance companies pulling out of California Communities.

2024 LHMP Update Hazards	Decrease in Vulnerability	No Change in Vulnerability	Increase in Vulnerability
Flood: Localized Stormwater Flooding			X

- Climate change issues may result in more localized flooding as the climate warms and more frequent, wetter, and greater intensity storms create more runoff.
- New development in unmapped flood hazard areas could result in a net increase in vulnerability should these areas experience increased stormwater/localized flooding. However, development requirements that require mitigation of stormwater runoff work to mitigate this hazard.
- Several years of heavy rains and atmospheric river events resulted in more localized flooding throughout the Planning Area. Generally, damage occurred in low lying areas around the rivers. Road damage and closures continue to occur during heavy storm events.
- During large storm events, power issues occur and pumps go out resulting in greater localized flooding.
- Outdated drainage systems also contribute to a greater vulnerability to localized, stormwater flooding.
- The changing of crops from rice fields to trees have also increased the localized flooding issue in the Planning Area. The trees don't have the capacity to absorb flood waters like the rice fields.

2024 LHMP Update Hazards	Decrease in Vulnerability	No Change in Vulnerability	Increase in Vulnerability
Landslides, Mudslides, and Debris Flows			X

- Over the last couple of years, with the severe drought, much of the vegetation along sloped areas is failing to thrive, thus there is a lack of vegetation to hold soil contributing to the landslide/mudslide potential.
- Combined with recent heavy rains and atmospheric river events contributing to saturated soils, the landslide potential increased in the Planning Area, especially in post fire areas.
- Climate change brings renewed concern moving forward for heavy and more intense rains, storms and associated issues to the Colusa County Planning Area, which include a greater potential for landslides and mudslides.
- Although as further noted, these landslide areas often occur in remote, undeveloped areas that would have limited damages during a landslide.

2024 LHMP Update Hazards	Decrease in Vulnerability	No Change in Vulnerability	Increase in Vulnerability
Levee Failure			X

- An increase in seepage issues further away from the levees has caused additional concern.
- The new, 2024 DFIRMs reflect the decertification of all Planning Area levees. Thus, more people are located in the 1% annual chance floodplain subject to NFIP flood insurance requirements. However, even though the floodplains may change due to the levee certification issue, the fact remains that the levees still provide a significant level of protection to Planning Area communities.
- Similar to other hazards, increased development in areas protected by levees could result in an increase in vulnerability.

2024 LHMP Update Hazards	Decrease in Vulnerability	No Change in Vulnerability	Increase in Vulnerability
Severe Weather: Extreme Cold and Freeze		X	

- Similar to other weather hazards, the overall vulnerability of the Planning Area changes from year to year depending on the season.
- The HMPC further noted, that extreme cold and freeze and their impacts are mostly an agricultural issue.

2024 LHMP Update Hazards	Decrease in Vulnerability	No Change in Vulnerability	Increase in Vulnerability
Severe Weather: Extreme Heat			X

- According to the NWS, there has been an increase in severe heat days in recent years. 2021, 2022, 2023, and 2024 were some of the hottest years on record.
- Climate change issues will continue to increase heat related impacts and vulnerabilities. Air quality issues increase with more extreme heat days.
- Vulnerable populations are at the greatest risk to this hazard. Low income residents may not be able to afford air conditioning. Seniors, the very young, medically vulnerable, and unhoused are not as resilient to this hazard.
- Extreme heat events are resulting in more power outages and related issues. This has resulted in well pumps going out and people not having access to water for extended periods of time.
- The heat, combined with drought (tree die back) conditions, has increased the potential for wildfires and contributes to fire weather conditions triggering a PSPS.

2024 LHMP Update Hazards	Decrease in Vulnerability	No Change in Vulnerability	Increase in Vulnerability
Severe Weather: Heavy Rains and Storms			X



- Similar to other weather hazards, the overall vulnerability of the Planning Area changes from year to year depending on the season. Recent years have seen significant and heavy rains, and an increase in atmospheric river events causing flooding and other adverse impacts to the County. Storms continue to be more intense and more frequent than in years proceeding this last drought.
- During large storm events, power issues occur and pumps go out resulting in greater localized flooding.
- Climate change brings renewed concern moving forward for heavy rains, storms and associated issues to the County.

2024 LHMP Update Hazards	Decrease in Vulnerability	No Change in Vulnerability	Increase in Vulnerability
Severe Weather: High Winds and Tornadoes			X

- Severe wind events have had greater impact in recent years following several years of drought combined with a year of heavy rains. With trees getting older in the Planning Area, drought has a greater impact on their stability, with compromised trees often falling over during high wind events.
- Stream and levee banks see more wave action and erosion during high wind events.
- Severe wind events exacerbate the wildfire hazard and contribute to an increase in PSPS events.

2024 LHMP Update Hazards	Decrease in Vulnerability	No Change in Vulnerability	Increase in Vulnerability
Streambank Erosion			X

- Recent years have seen significant and heavy rains, and an increase in atmospheric river events causing flooding and other adverse impacts to the County. Storms continue to be more intense and more frequent. This contributes to flooding and an increase in streambank erosion.
- Climate change brings renewed concern moving forward for heavy rains, storms and streambank erosion in the County.

2024 LHMP Update Hazards	Decrease in Vulnerability	No Change in Vulnerability	Increase in Vulnerability
Subsidence			X

- This hazard has seen some change since the last plan, with subsidence issues related to groundwater pumping during years of drought.
- Some wells in certain areas such as Arbuckle have starting pumping sand. Heavy rain years do help to recharge water. These types of occurrences show that something is moving.
- Groundwater recharge programs can limit future subsidence issues related to groundwater pumping and drawdown.

2024 LHMP Update Hazards	Decrease in Vulnerability	No Change in Vulnerability	Increase in Vulnerability
Wildfire			X



- Compounded by current drought conditions (increasing tree mortality and overall wildfire conditions), the wildfire hazard has substantially increased and is no longer just a seasonal issue. The wildfire season, including the potential for a catastrophic wildfire, is now a year around concern.
- While still limited, the increased development in WUI areas within the County also contributes to an increase in vulnerability.
- With large wildfires occurring throughout California, the Planning Area has seen a significant change in air quality from smoke resulting in more recorded bad air days.
- Colusa County also experienced significant wildfire activity within the County since the 2018 LHMP.
- Wind has been a major contributor to the potential for a catastrophic wildfire.
- Catastrophic wildfires in northern counties has created an issue in Colusa as evacuees flee the fires and look to nearby communities, such as Colusa, for shelter. As well, many of the shelter and other areas set up for evacuees, Cal Fire uses these areas as staging areas for nearby fires.

## 2.3 2018 LHMP Mitigation Strategy Successes and Status

The participating jurisdictions successfully implemented numerous mitigation actions identified in the 2018 LHMP mitigation strategies, thus working diligently towards meeting their 2018 goals and objectives, as follows:

### ***Goal 1: Minimize risk and vulnerability of Colusa County to hazards and protect lives and prevent losses to property, public health, economy, and the environment***

- Provide protection for existing and future development
- Provide protection for critical facilities, infrastructure, and services and minimize disruption
- Prevent repetitive losses and reoccurring damages from happening

### ***Goal 2: Increase community/public outreach, education, and awareness for all hazards to minimize hazard-related losses***

- Improve the understanding of Colusa County residents, business owners, and visitors to hazards of concern and how to effectively be prepared and take action to mitigate the impacts of future hazard events

### ***Goal 3: Improve communities' capabilities to prevent/mitigate hazard-related losses and to be prepared for, respond to, and recover from a disaster event***

- Continued improvements to emergency services and public safety capabilities
- Increase participation by all County entities and agencies operating in Colusa County in disaster planning activities to improve hazard awareness, intra-and inter-agency communications, mitigation action implementation, and coordinated response and recovery efforts

### ***Goal 4: Improve community resiliency to flooding in Colusa County***

- Reduce the flood risk and vulnerability in Colusa County
- Reduce life safety issues, property loss, and damages associated with flooding
- Minimize impact of heavy rains and localized flooding
- Maintain/improve flood protection and control measures, including maintenance and improvements to the levee systems, to minimize future flood related impacts and damages

*Goal 5: Continue to protect and promote Colusa County agriculture by ensuring safe and effective farming practices that protect the citizens and environment and that minimize future hazard related losses*

- Support water projects that increase available agricultural water during critical times of need for local crops while ensuring a consistent water supply and distribution to County residents.
- Educate County citizens as to how they can help protect Colusa's agriculture from noxious weeds and pests

### **2.3.1. Success Stories**

Since the 2018 LHMP, progress has been made on the implementation of the mitigation strategies contained within the previous Plan. Beyond the mitigation strategy implementation from the 2018 LHMP, the participating jurisdictions also continue to implement additional hazard mitigation measures not contained within the previous Plan. This section highlights key mitigation success since the 2018 LHMP.

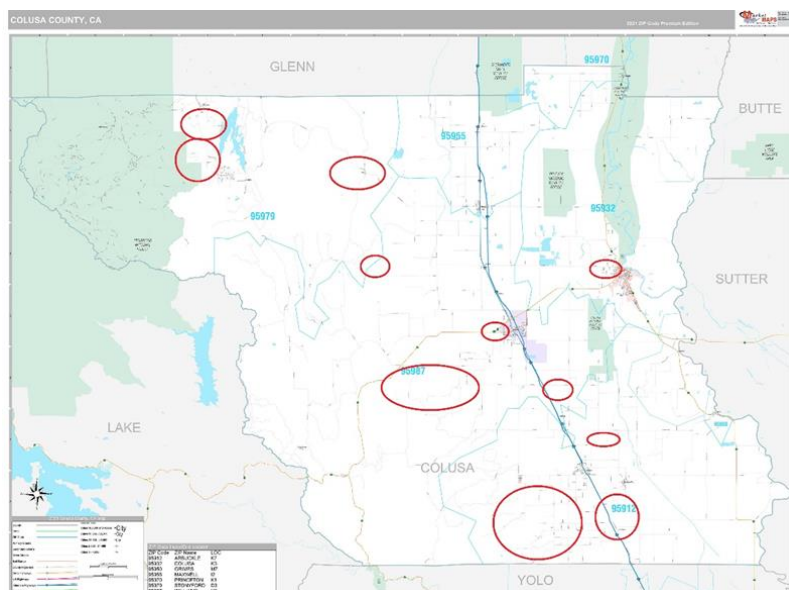
#### *Drought Water Tank and Hauling Program*

As a result of recent Drought conditions, in November 2021, Colusa County through their Local Drought Emergency Proclamation, developed and implemented a Bottled and Hauled Water Project to provide temporary assistance to residents with failed domestic wells. The project comprised the purchase and installation of potable water tanks on the premises, connection to the household water delivery system, and water deliveries provided as needed based on a state average conservative consumption during drought. The project was funded by a California Department of Water Resources Grant.

The project was implemented in various areas of the County of Colusa at residences experiencing dry wells. These include mountainous areas, low-lying foothills, and flatlands in the south region of the county or anywhere else where groundwater levels have declined and left domestic wells dry. At its peak, this project served 31 homes. Throughout project a total of 1,222,500 gallons equivalent to 3.751715395 acre-feet of water was delivered.

Many homes' wells recharged during the 2022-2023 winter storms. In early 2024, it was determined that drought conditions no longer exist in most of these areas following two wet winters. The total budget for this project was \$718,750.00, of which only 26% of budget was utilized over the duration of the project. The project was considered a success and was completed on March 31, 2024.

**Figure 2-1 Locations of dry wells with participation in Emergency Water Tank & Hauling Program**



Source: Colusa County

**Figure 2-2 Delivery of Potable Water and Storage Tanks**



Source: Colusa County

### ***Flood Risk Reduction Project for the Unincorporated Town of Grimes***

As detailed in the 2018 LHMP, a Flood Risk Reduction Feasibility Study was undertaken and completed in February 2020, and a feasible alternative was identified for flood risk reduction. The Sacramento River West Side Levee District took the lead for the second phase of this project, and secured two additional grants: DWR Small Community Flood Risk Reduction – Phase II and FEMA Building Resilient Infrastructure Communities (BRIC Project EMF-2021-BR-089-0008: Grimes Floodplain Restoration and Levee Resiliency Project). The two grants will help advance permitting, design, and construction of the preferred risk reduction alternative.

### 2.3.2. 2018 Mitigation Strategy Update

The 2018 LHMP contained separate mitigation strategies for each participating jurisdiction. These have been combined below. The 2018 LHMP contained 68 separate mitigation actions for the jurisdictions. Of these, 6 are complete, 3 have portions that are complete and portions that are ongoing, 18 are ongoing, and 31 have not been started. 30 actions have been identified for inclusion in this LHMP Update and have been carried forward in Chapter 5. Table 2-1 provides a status summary of the mitigation action projects from the 2018 LHMP. Following the table is a description of the status of each project.

*Table 2-1 2018 LHMP: Mitigation Action Status Summary*

Action Title	Complete	Ongoing	Not Yet Started	In 2024 Update*
<b>Colusa County</b>				
<b>All Hazard Actions</b>				
Action 1.Integrate Local Hazard Mitigation Plan into Safety Element of General Plan		X		Y
Action 2.Enhance Public Education and Awareness of Natural Hazards and Public Understanding of Disaster Preparedness		X		Y
Action 3.Access to Locked Gate on Green Rd.			X	N
Action 4.Backup Generator		X		Y
Action 5.Alert and Warning System for Sheriff's Office		X		Y
Action 6.Generator Purchases to Enhance Project Power for Colusa County		X		Y
Action 7.Hard Road Closure Mechanisms, River Road			X	Y
Action 8.Conduct Evacuation and Shelter Planning for All Communities Countywide			X	Y
<b>Agricultural Hazards Actions</b>				
Action 9.Domestic Pets and Livestock Plan review and update	X			N
<b>Climate Change Actions</b>				
Action 10. Climate Change Mitigation Activities and Education		X		Y
<b>Dam Failure Actions</b>				
Action 11. Ensure Communication about Dam Safety and Awareness Countywide		X		Y
<b>Drought &amp; Water Shortage Actions</b>				
Action 12. Drought Tolerance and Resilience Project County-wide, including Public Education		X		N
<b>Earthquake Actions</b>				
Action 13. Earthquake Vulnerability Study and Retrofitting of County Assets			X	Y
<b>Flood, Localized Flood, Heavy Rain and Storms Actions</b>				
Action 14. Corbin Road Repair			X	N
Action 15. Seepage Mitigation, East Clay Street, Colusa (between city and county)			X	N

Action Title		Complete	Ongoing	Not Yet Started	In 2024 Update*
Action 16.	Highway 20 Flood Prevention			X	N
Action 17.	Repair and Enhance Banks at Indian Creek in Lodoga			X	N
Action 18.	Lone Star Road Flood-Prevention			X	N
Action 19.	Powell Slough Phase II			X	N
Action 20.	Repair and Enhance Banks at Salt Creek in Arbuckle			X	N
Action 21.	San Jose Road Elevation Project			X	N
Action 22.	Colusa County Storm Water Plan Update			X	N
Action 23.	Lurline Avenue Culvert Replacement Project			X	N
Action 24.	Lonestar Road Culvert Project			X	N
Action 25.	Sandbagging Training for county and city personnel; purchase Sandbagging Stations		X		N
Action 26.	Leesville Road elevation project, Williams			X	N
Action 27.	Princeton Drainage Assessment and Revision			X	N
<b>Flooding, Landslide, High Winds Actions</b>					
Action 28.	Goat Mountain Road Erosion Control Project			X	N
Action 29.	Fouts Springs Road Drainage Modification and Erosion Control Project			X	N
Action 30.	Brim Road Drainage Modification and Erosion Control Project			X	N
Action 31.	Cook Springs Road Drainage Modification and Erosion Control Project			X	N
Action 32.	Sites Lodoga Road Drainage Modification and Erosion Control Project			X	N
Action 33.	Lodoga Stonyford Road Drainage Modification and Erosion Control Project			X	N
Action 34.	Ground Surface Soil Stabilization, Western Colusa County in Burn Scar Areas			X	N
<b>Hazardous Materials Actions</b>					
Action 35.	Hazardous Materials Area Response Plan Evaluation and Update	X			N
<b>Levee Failure, Flood, Localized Flooding, and Streambank Erosion</b>					
Action 36.	Flood Risk Reduction Project for the Unincorporated Town of Princeton			X	Y**
Action 37.	Flood Risk Reduction Project for the City of Colusa	X	X		Y**
Action 38.	Flood Risk Reduction Project for the Unincorporated Town of Grimes			X	Y**
Action 39.	Map and Assess County-wide Vulnerability to Riverbank Erosion		X		Y**
Action 40.	Seepage Mitigation Projects Countywide			X	N
Action 41.	Levee Repair- Rip Rap Maintenance		X		Y**

Action Title	Complete	Ongoing	Not Yet Started	In 2024 Update*
<b>Levee Failure and Agricultural Pests and Diseases Actions</b>				
Action 42. Public Awareness Campaign and Weed Abatement Patrols for Squirrel Population Management		X		N
Action 43. Public Awareness Campaign and Weed Abatement Patrols for Soil Absorption Effectiveness		X		Y**
<b>Severe Weather: Extreme Cold and Freeze Actions</b>				
Action 44. Evaluate Extreme Cold Plan (Including Damage Mitigation; Winter Storm, High Wind and Freeze Communication Actions)		X		N
<b>Subsidence (with Drought and Flood) Actions</b>				
Action 45. Map and Assess Countywide Vulnerability to Subsidence		X		N
Action 46. Surface Water Storage Project Countywide			X	Y**
<b>Wildfire Actions</b>				
Action 47. Maintain Defensive Space	X			N
Action 48. Fire Fuel Modification and Defensible Space Projects	X			N
Action 49. Wildfire Mitigation			X	Y
<b>Wildfire and Drought Actions</b>				
Action 50. 50,000 Gallon Water Tank			X	N
<b>City of Colusa Actions</b>				
<b>All Hazard Actions</b>				
Integrate Local Hazard Mitigation Plan into Safety Element of General Plan		X		Y
<b>Earthquake Actions</b>				
URM Mapping and Identification			X	Y
<b>Flood, Localized Flood, and Heavy Rain and Storms Actions</b>				
Central City Flood Hazard Mitigation Project	X	X		N
<b>City of Williams Actions</b>				
<b>All Hazard Mitigation Actions</b>				
Action 1. Integrate Local Hazard Mitigation Plan into Safety Element of General Plan	X			Y
<b>Drought and Water Shortage Actions</b>				
Action 2. Develop Drought Program Plan			X	N
<b>Earthquake Actions</b>				
Action 3. EQ Vulnerability Study and Retrofit of City Assets			X	Y
<b>Flood: 100/200/500; Localized Flooding; Levee Failure; Stream Bank Erosion, Heavy Rains and Storms Actions</b>				
Action 4. Levee Construction			X	N
Action 5. Hwy 99W and Hwy 20 Flood Wall or Similar Construction			X	N
Action 6. Detention Basin Construction			X	Y
Action 7. Improve Stormwater Management Planning	X			Y



Action Title	Complete	Ongoing	Not Yet Started	In 2024 Update*
<b>RD 108 Actions</b>				
<b>All Hazard Actions</b>				
Emergency Generator – District Office	X	X		Y
<b>Drought and Water Shortage Actions</b>				
Groundwater Wells		X		N
<b>Climate Change, Flood, Localized Flood, Dam Failure, Levee Failure, Streambank Erosion, Heavy Rains and Storms, Winds and Tornado Actions</b>				
Emergency Generator – Pump Stations		X		Y
Stabilization of Colusa Basin Drain Levee		X		Y
Hardening of Colusa Basin Drain Levee		X		Y
Invasive Species Removal in Canals				N
<b>Sacramento River West Side Levee District Actions</b>				
<b>Climate Change, Flood, Localized Flood, Dam Failure, Levee Failure, Heavy Rains and Storms, High Winds, Stream Bank Erosion Actions</b>				
Seepage Mitigation of Sacramento River Levee		X		Y
Hardening of Sacramento River Levee		X		Y

\* Actions not carried forward were determined by the jurisdictions to be no longer feasible, relevant, lacked funding and local resources to implement, and/or no longer considered a priority.

\*\* These actions were combined into a single action in this LHMP Update. This action in Chapter 5 is titled Roadway Flood Protection.

## *Colusa County Mitigation Actions*

### **All Hazard Actions**

#### **Action 1. Integrate Local Hazard Mitigation Plan into Safety Element of General Plan**

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** Expect to have LHMP integrated in plan before completion of LHMP 2024 update. Due to its ongoing nature, this project is being brought forward into this LHMP Update.

#### **Action 2. Enhance Public Education and Awareness of Natural Hazards and Public Understanding of Disaster Preparedness**

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** As of 2023 OES has been participating in various community events to provide information related to Multi-Hazards preparedness. Due to its ongoing nature, this project is being brought forward into this LHMP Update.



### Action 3. Access to Locked Gate on Green Rd.

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** This project has not been started yet due to lack of resources and higher priority safety issues. It is being lumped in with other roads in order to create a larger project for ease of securing and managing funding and economy of scale of the larger project.

### Action 4. Backup Generator

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** OES purchased generators through PSPS grants for OES, DHHS and continues to look for additional funding to purchase generators to provide assistance to facilities during major power outages.

### Action 5. Alert and Warning System for Sheriff's Office

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** Working with DHHS in obtaining approval for use of IPAWS. Currently using RAVES located and budgeted by DHHS. Expect to conduct drills countywide verify system works properly and reaching majority of communities.

### Action 6. Generator Purchases to Enhance Project Power for Colusa County

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** OES has generators to deploy in the event of power outages. Will continue to purchase generators as funding becomes available.

### Action 7. Hard Road Closure Mechanisms, River Road

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** This project has not been started yet due to lack of resources and higher priority safety issues. It is being lumped in with other roads in order to create a larger project for ease of securing and managing funding and economy of scale of the larger project.

### Action 8. Conduct Evacuation and Shelter Planning for All Communities Countywide

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** Project not started due to funding, expect to contract consultant to assist with plan.

## Agricultural Hazards Actions

### Action 9. Domestic Pets and Livestock Plan review and update

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** Domestic Pets and Livestock Plan is complete.

Plan incorporated into the EOP Annexes-Appendices. To date there has not been the need to follow plan procedures.

## Climate Change Actions

### Action 10. Climate Change Mitigation Activities and Education

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** Portions of this are complete, and portions are ongoing. The ongoing portions are being carried forward in this LHMP Update.

## Dam Failure Actions

### Action 11. Ensure Communication about Dam Safety and Awareness Countywide

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** This project is not started.

## Drought & Water Shortage Actions

### Action 12. Drought Tolerance and Resilience Project County-wide, including Public Education

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** This project is ongoing, but is not being carried forward in this Plan Update.

## Earthquake Actions

### Action 13. Earthquake Vulnerability Study and Retrofitting of County Assets

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** This project is ongoing, and is not being carried forward in this Plan Update.

## Flood, Localized Flood, Heavy Rain and Storms Actions

### Action 14. Corbin Road Repair

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** No progress has been made on this project due to lack of resources, funding and personnel to see the process and acquisition of funding. It is also not as high of a priority for the County due to the low volume of traffic on this road compared to other County roads.

### Action 15. Seepage Mitigation, East Clay Street, Colusa (between city and county)

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** This project has not been started yet due to the

need to work with the adjacent private property owners in order to come to an agreement for a solution. This needs to be done prior to determining the details necessary to put together and estimate and project plans. With a lack of staffing resources, this discussion with the landowners has not been able to take place.

#### **Action 16. Highway 20 Flood Prevention**

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** No progress has been made on this project. The road is owned by Caltrans and there has not been a funding opportunity available to approach the State with for a partnered project. In addition the resources for a project this large, not only fiscally, but staff resources as well have not been available.

#### **Action 17. Repair and Enhance Banks at Indian Creek in Lodoga**

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** No progress has been made on this project due to lack of resources, funding and personnel to oversee the process and acquisition of funding. It is also not as high of a priority for the County due to the low volume of traffic on this road compared to other County roads. This project may be included with other projects for an economy of scale.

#### **Action 18. Lone Star Road Flood-Prevention**

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** No progress has been made on this project due to lack of resources, funding and personnel to oversee the process and acquisition of funding. It is also not as high of a priority for the County due to the low volume of traffic on this road compared to other County roads. This project may be included with other projects for an economy of scale.

#### **Action 19. Powell Slough Phase II**

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** No Progress has been made on this project as there are no resources currently available for the initiation of it and it is part of a larger future effort in working with Caltrans to address the overall flooding issues affecting State Route 20. This would be included in the Stater Route 20 flood prevention project.

#### **Action 20. Repair and Enhance Banks at Salt Creek in Arbuckle**

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** No progress has been made to this point due to a lack of resources to complete the project. The environmental work is complicated and very costly, which the County does not currently have funding to complete. As the County looks to address streambed flooding at different locations and State or Federal funding becomes available for project development to address these issues, the County will pursue these funding opportunities and this project may be coupled with other locations for economy of scale.

#### Action 21. San Jose Road Elevation Project

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** No progress has been made on this project due to lack of resources, funding and personnel to oversee the process and acquisition of funding. It is also not as high of a priority for the County due to the low volume of traffic on this road compared to other County roads. This project may be included with other projects for an economy of scale.

#### Action 22. Colusa County Storm Water Plan Update

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** This project is ongoing.

#### Action 23. Lurline Avenue Culvert Replacement Project

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** No progress has been made on this project due to lack of resources, funding and personnel to see the process and acquisition of funding. It is also not as high of a priority for the County due to the low volume of traffic on this road compared to other County roads. This project may be included with other projects for an economy of scale.

#### Action 24. Lonestar Road Culvert Project

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** No progress has been made on this project due to lack of resources, funding and personnel to see the process and acquisition of funding. It is also a low priority for the County due to the low volume of traffic on this road. This project may be included with other projects for an economy of scale.

#### Action 25. Sandbagging Training for county and city personnel; purchase Sandbagging Stations

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** For County personnel, on the job training is completed as needed as new employees are hired and as the flood season approaches. Further training could be done including and coordinated with other county agencies as time and resources allow.

#### Action 26. Leesville Road elevation project, Williams

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** No progress has been made on this project due to lack of resources, funding and personnel to see the process and acquisition of funding. It is also not as high of a priority for the County due to the low volume of traffic on this road compared to other County roads. This project may be included with other projects for an economy of scale.

#### Action 27. Princeton Drainage Assessment and Revision

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** The effort necessary to complete this work has not been able to be undertaken due to staffing constraints. Future efforts will likely be done through contracted services when funding is available.

#### Flooding, Landslide, High Winds Actions

#### Action 28. Goat Mountain Road Erosion Control Project

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** During the spring of 2023, some emergency work was done in coordination with OES and FEMA to repair an isolated area. However, work on the larger overall effort of the road in its entirety has not been initiated at this point. This is a larger effort which will require significant efforts and resources.

#### Action 29. Fouts Springs Road Drainage Modification and Erosion Control Project

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** No progress has been made on this project due to lack of resources, funding and personnel to see the process and acquisition of funding. It is also not as high of a priority for the County due to the low volume of traffic on this road compared to other County roads. This project may be included with other projects for an economy of scale.

#### Action 30. Brim Road Drainage Modification and Erosion Control Project

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** No progress has been made on this project due to lack of resources, funding and personnel to see the process and acquisition of funding. It is also not as high of a priority for the County due to the low volume of traffic on this road compared to other County roads. This project may be included with other projects for an economy of scale.

#### Action 31. Cook Springs Road Drainage Modification and Erosion Control Project

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** No progress has been made on this project due to lack of resources, funding and personnel to see the process and acquisition of funding. It is also not as high of a priority for the County due to the low volume of traffic on this road compared to other County roads. This project may be included with other projects for an economy of scale.

#### Action 32. Sites Lodoga Road Drainage Modification and Erosion Control Project

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** No progress has been made on this project due to lack of resources, funding and personnel to see the process and acquisition of funding. It is also not as high

of a priority for the County due to the low volume of traffic on this road compared to other County roads. This project may be included with other projects for an economy of scale.

#### **Action 33. Lodoga Stonyford Road Drainage Modification and Erosion Control Project**

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** No progress has been made on this project due to lack of resources, funding and personnel to see the process and acquisition of funding. It is also not as high of a priority for the County due to the low volume of traffic on this road compared to other County roads. This project may be included with other projects for an economy of scale.

#### **Action 34. Ground Surface Soil Stabilization, Western Colusa County in Burn Scar Areas**

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** This project has not yet been started due to funding issues.

### **Hazardous Materials Actions**

#### **Action 35. Hazardous Materials Area Response Plan Evaluation and Update**

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** Hazardous Materials Area Plan has been completed see below link to county website for plan.

<https://www.countyofcolusa.org/DocumentCenter/View/10374/HMAP-September-2018-Update?bidId>

### **Levee Failure, Flood, Localized Flooding, and Streambank Erosion**

#### **Action 36. Flood Risk Reduction Project for the Unincorporated Town of Princeton**

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** Not started due to funding. At this point no work has been done to improve the infrastructure within the town. Signs have been put up to warn of standing water, however this is the limit of work completed to this point. Further work will require additional resources the County does not currently have. This project could potentially be combined with flood protection efforts within the town of Grimes for economy of scale in design, environmental and other aspects of project development.

#### **Action 37. Flood Risk Reduction Project for the City of Colusa**

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** the Flood Risk Reduction Feasibility Study was completed in February 2020, and a feasible alternative was identified. Ongoing: looking for a project champion and funding source to assist design, permitting, and construction.

#### Action 38. Flood Risk Reduction Project for the Unincorporated Town of Grimes

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** At this point no work has been done to improve the infrastructure within the town. Signs have been put up to warn of standing water, however this is the limit of work completed to this point. Further work will require additional resources the County does not currently have. This project could potentially be combined with flood protection efforts within the town of Princeton for economy of scale in design, environmental and other aspects of project development.

#### Action 39. Map and Assess County-wide Vulnerability to Riverbank Erosion

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** In the past, this has been County OES, Sacramento River Westside Levee District. PW does not have the resources to complete this effort. As such, this project is ongoing.

#### Action 40. Seepage Mitigation Projects Countywide

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** No work on this project has been done to date. This is a large project in which all areas of concern need to be identified through a study. Once identified, plans would need to be developed, environmental work done, and funding secured. Currently the County does not have the resources to start project development necessary for this project. Locations such as Clay street and others would be lumped into one larger effort within a study.

#### Action 41. Levee Repair- Rip Rap Maintenance

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** This project is ongoing, but it led by the reclamation districts. It will not be carried forward by the County in this Plan Update.

### Levee Failure and Agricultural Pests and Diseases Actions

#### Action 42. Public Awareness Campaign and Weed Abatement Patrols for Squirrel Population Management

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** County Ag Commissioner provides the public various information on their website and office. [Colusa County Department of Agriculture | Colusa County, CA - Official Website \(countyofcolusa.org\)](https://colusa.ca.gov/colusa-county-department-of-agriculture/)

#### Action 43. Public Awareness Campaign and Weed Abatement Patrols for Soil Absorption Effectiveness

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** County Ag Commissioner provides the public



various information on their website and office. [Colusa County Department of Agriculture | Colusa County, CA - Official Website \(countyofcolusa.org\)](https://colusa.ca.gov/colusa-county-department-of-agriculture/)

### Severe Weather: Extreme Cold and Freeze Actions

**Action 44. Evaluate Extreme Cold Plan (Including Damage Mitigation; Winter Storm, High Wind and Freeze Communication Actions)**

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** Completed, have established procedures during severe weather. Agency collaboration is in place to provide assistance to vulnerable population and/or in general all within county.

### Subsidence (with Drought and Flood) Actions

**Action 45. Map and Assess Countywide Vulnerability to Subsidence**

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** 2021 Drought caused wells in the Arbuckle, Stonyford, Williams, Sites and Maxwell to dry. The county received CDAA and DWR assistance. Arbuckle and Stonyford were affected the most. Stonyford resident's wells recharged after the 2023 Winter Storms. The majority of Arbuckle residents had new wells installed due to the depth of their previous wells. During the time County was able to identify these areas and track where the recharge occurred and new wells installed. OES has documentation of these locations for future reference. Residents have been provided with Drought Preparedness information.

**Action 46. Surface Water Storage Project Countywide**

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** Not Started, starting point will be to review process-based Senate Bill 122 which was subsequently passed which added Water Code section 1242.1 which sets out a process to divert floodwaters. It expires January 1, 2029.

### Wildfire Actions

**Action 47. Maintain Defensive Space**

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** This has been completed. The Rancheria takes care of clearing brush and grass away on a yearly basis before fire season.

**Action 48. Fire Fuel Modification and Defensible Space Projects**

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** Not started due to funding.

**Action 49. Wildfire Mitigation**

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** Not started due to funding.

**Wildfire and Drought Actions**

**Action 50. 50,000 Gallon Water Tank**

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** Not completed due to funding.

## *City of Colusa Actions*

### All Hazard Actions

#### Integrate Local Hazard Mitigation Plan into Safety Element of General Plan

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** The project was implemented and has been ongoing due to insufficient staffing and time to promptly administer the general plan updates. We have gradually completed portions of the updates from our planning department. We do not have enough data collection to provide evidence of loss or avoidance due to a lack of staff time and financial resources.

### Earthquake Actions

#### URM Mapping and Identification

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** This project was not implemented due to a lack of staff hours, funding, and trained personnel to perform the mapping and identification. There is no evidence of loss or avoidance.

### Flood, Localized Flood, and Heavy Rain and Storms Actions

#### Central City Flood Hazard Mitigation Project

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** The city implemented this project with the county and districts and developed a flood response plan that maps out actions and trigger points for flood responses within the city and county. Though we have not had to activate the flood response plan since its creation, I believe it will reduce the loss of life and property if needed. This project should continue to be listed as in progress due to the updated FEMA flood mapping; the city has not yet fully evaluated the impact of this remapping and will most definitely need to update and improve on the flood response plans and actions given the new data.

## *City of Williams Actions*

### All Hazard Mitigation Actions

#### Action 1. Integrate Local Hazard Mitigation Plan into Safety Element of General Plan

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** The LHMP was integrated into the Safety Element of the General Plan in September of 2023. The City does not have data to support evidence of loss avoidance.

### Drought and Water Shortage Actions

#### Action 2. Develop Drought Program Plan

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** This project has not started yet. The City will need to investigate funding to develop a drought program plan.

### Earthquake Actions

#### Action 3. EQ Vulnerability Study and Retrofit of City Assets

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** This project has not started yet due to lack of funding availability for the project.

### Flood: 100/200/500; Localized Flooding; Levee Failure; Stream Bank Erosion, Heavy Rains and Storms Actions

#### Action 4. Levee Construction

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** This project has not been implemented due to lack of funding.

#### Action 5. Hwy 99W and Hwy 20 Flood Wall or Similar Construction

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** This project has not been implemented due to lack of funding.

#### Action 6. Detention Basin Construction

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** The detention basin for the Business Park section

of the City is currently in the engineering phase. The City expects to complete review of the plans and start construction within the next 2 years. Once construction is completed, any avoidance of loss will be evident.

**Action 7.        Improve Stormwater Management Planning**

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** This project has not yet started. The City will pursue grant funding to create a new Storm Water Master Plan as the previous plan has been deemed infeasible.

## *RD 108 Actions*

### All Hazard Actions

#### Emergency Generator – District Office

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** This project is complete, but a maintenance portion of the project is being carried forward into this Plan Update.

### Drought and Water Shortage Actions

#### Groundwater Wells

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** This project is ongoing, but is not being carried forward in this Plan Update.

### Climate Change, Flood, Localized Flood, Dam Failure, Levee Failure, Streambank Erosion, Heavy Rains and Storms, Winds and Tornado Actions

#### Emergency Generator – Pump Stations

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** This project is ongoing. Waiting on funding. It is being carried forward into this Plan Update.

#### Stabilization of Colusa Basin Drain Levee

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** This project is ongoing. Waiting on funding. It is being carried forward into this Plan Update.

#### Hardening of Colusa Basin Drain Levee

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** This project is ongoing. Waiting on funding. It is being carried forward into this Plan Update.

#### Invasive Species Removal in Canals

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** This project is ongoing, but is not being carried forward in this Plan Update.

## *Sacramento River West Side Levee District Actions*

Climate Change, Flood, Localized Flood, Dam Failure, Levee Failure, Heavy Rains and Storms, High Winds, Stream Bank Erosion Actions

### Seepage Mitigation of Sacramento River Levee

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** This project is ongoing and is included in the LHMP Update.

### Hardening of Sacramento River Levee

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** This project is ongoing and is included in the LHMP Update.