

## Chapter 2 What's New

**Requirements §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 2016 Sacramento County Local Hazard Mitigation Plan (LHMP) contained descriptions of their planning processes, the risk assessments of identified hazards for the Sacramento County Planning Area and mitigation strategies for reducing the risk and vulnerability from these hazards. Since approval of this plan by FEMA, progress has been made by the County, the two incorporated communities, and six special Districts on implementation of the 2016 mitigation strategies. As part of this LHMP Update, a thorough review and update of the 2016 County LHMP was conducted to ensure that this Update reflects current community conditions and priorities in order to realign the updated mitigation strategy for the next five-year planning period. This section of this LHMP Update includes the following:

- **What's New in the Plan Update.** Section 2.1 provides an overview of the approach to updating the Plan 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 Sacramento County Planning Area as well as information on current and future development trends affecting community vulnerability and related issues. The actual updated data, discussions, and associated analyses are contained in their respected sections within this LHMP Update.
- **Summary of Significant Changes to Current Conditions and Hazard Mitigation Program Priorities.** Section 2.2 provides a summary of significant changes in current conditions, changes in vulnerability, and any resulting modifications to the community's mitigation program priorities.
- **2016 Mitigation Strategy Status and Successes.** Section 2.3.2 provides a description of the status of mitigation actions from the 2016 LHMP and also indicates whether a project is no longer relevant or is recommended for inclusion in the updated 2021 mitigation strategy. This section also highlights key mitigation success stories of the County and other participating jurisdictions since the 2016 LHMP.

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

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

This LHMP Update involved a comprehensive review and update of each section of the 2016 Plan and includes an assessment of the success of the participating communities in evaluating, monitoring, and implementing the mitigation strategy outlined in the 2016 LHMP. Only the information and data still valid from the 2016 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;
- Document success stories where mitigation efforts 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 action recommendations or changes in action prioritization.

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

As part of its comprehensive review and update of each section of the Plan, Sacramento County and 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 is identified below in this section and is also sourced in context within Chapter 4, Risk Assessment. Specific data used is sourced throughout this LHMP Update. This new data and associated analysis provided valuable input for the development of the updated mitigation strategy presented in Chapter 5 of this LHMP Update.

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

➤ TO BE INSERTED

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

INSERT AFTER FINAL MEETING

### 2.3 2016 LHMP Mitigation Strategy Successes and Status

Sacramento County and participating jurisdictions have been successful in implementing actions identified in the 2016 Sacramento County LHMP Mitigation Strategies, thus, working diligently towards meeting their 2016 goals and objectives of:

**GOAL 1:** Minimize risk and vulnerability of the Sacramento County community to the impacts of natural hazards and protect lives and reduce damages and losses to property, public health, economy, and the environment.

#### Objectives:

- Protect, preserve, and promote public health and safety, livability, and the environment
- Assure long term protection and resiliency of existing and future development (including infill areas) from natural hazards

- Protect critical facilities from natural hazards and minimize interruption of essential infrastructure, utilities, and services
- Protect natural resources; Protect and enhance water quality and supply, critical aquatic resources and habitat for beneficial uses.
- Maintain/enhance the flood mitigation program to provide 100/200/500-year flood protection
- Minimize risk of levee breach, overtopping or other failures
- Mitigate Repetitive Loss Properties
- Continued enhancement of CRS programs
- Address localized drainage issues
- Reduce the potential of wildfire in Sacramento County and protect the community
- from adverse effects of wildfire, including secondary impacts such as air quality
- Protect vulnerable populations from the threat of natural hazards
- Address climate change influence in project design and development
- Promote hazard mitigation as an integrated public policy and as a standard business practice

**GOAL 2: Improve public outreach, awareness, education, and preparedness for all hazards to minimize hazard related losses**

**Objectives:**

- Increase outreach, communication and awareness of natural hazards and reduce exposure to all hazard related losses, including climate change
- Improve the communities' understanding of natural hazards and how to effectively be prepared and take action to mitigate the impacts of hazard events
- Develop and target outreach and education for each hazard type and risk area
- Increase access to natural hazard information via enhanced web and mobile applications before, during, and after a disaster
- Enhance public outreach programs to target all vulnerable populations, including multi-language communications and multi-mode delivery
- Continued promotion of flood insurance

**GOAL 3: Improve the capabilities of the community to mitigate losses and to be prepared for, respond to, and recover from a disaster event**

**Objectives:**

- Promote interagency coordination of mitigation planning and implementation efforts
- Minimize hazard-related damage in order to maintain current service levels
- Continued enhancements to emergency services capabilities, integrating new technologies to reduce losses and save lives
- Promote intergovernmental and interagency coordination, planning, training, exercising and communication to ensure effective community preparedness, response, and recover
- Increase the use of coordinated, shared resources between agencies
- Promote public/private partnerships in hazard mitigation and preparedness programs
- Identify, coordinate, and implement countywide evacuation and shelter in place planning for all populations and increase community awareness of these activities

**GOAL 4: Assure conformance to Federal and State Hazard Mitigation Initiatives and Maximize Potential for Mitigation Implementation**

**Objectives:**

- Maintain FEMA Eligibility/Position Jurisdictions for Grant Funding
- Maintain good standing with FEMA and State hazard mitigation programs, regulations and requirements
- Develop an overall mitigation funding strategy to prioritize and pursue mitigation projects in an equitable manner to benefit all populations
- Maximize funding opportunities through identification and tracking of all types of Federal and state grant programs to implement identified mitigation projects

Where possible, Sacramento County and participating jurisdictions used existing plans and programs to implement the 2016 mitigation strategies.

**2.3.1. Success Stories**

**INSERT**

*City of Rancho Cordova*

Being part of the 2016 LHMP Update allowed the City to closely track and ensure that the mitigation activities listed in the plan are being implemented or considered for funding. In addition, the City was able to apply for CALOES grant funding to implement some of the projects listed in the 2016 LHMP. The LHMP is an essential part of the City’s flood control and disaster mitigation programs.

**2.3.2. 2016 Mitigation Strategy Update**

The 2016 Sacramento County LHMP mitigation strategy contained 241 separate mitigation actions for the County and participating jurisdictions. Of the 241 actions, **X** have been completed, **X** are ongoing, and **X** have not been started. **X** 2016 Sacramento County actions have been identified for inclusion in this LHMP Update, and are carried forward in Chapter 5 in Table 5-4. Table 2-1 provides a status summary of the mitigation action projects from the 2016 Sacramento County LHMP. Following the table is a description of the status of each project.

*Table 2-1 Sacramento County’s 2016 LHMP Update: Mitigation Action Status Summary*

Action Title	Complete	Ongoing	Not Started	Project in Plan Update
<b>Sacramento County</b>				
<b>Multi-Hazard Actions</b>				
Integrate Local Hazard Mitigation Plan into Safety Element of General Plan	X	X		Y
Enhance Public Education and Awareness of Natural Hazards and Public Understanding of Disaster Preparedness		X		Y

Action Title	Complete	Ongoing	Not Started	Project in Plan Update
Increase pedestrian and bicycle evacuation routes by constructing regional bike/pedestrian trail infrastructure, and expanding connection to neighborhoods (particularly in vulnerable areas)		X		Y
Community Rating System (CRS) Program for Public Information (PPI)		X		Y
Flood Insurance Assessment, Awareness, and Promotion		X		Y
Public Outreach Mailers		X		N
Toxic Substance Release		X		N
<b>Climate Change Actions</b>				
Increase average fuel efficiency and reduce GHG emissions from the County Fleet and Fuels		X		Y
Reduce Sacramento County's vulnerability to Climate Change by reducing GHG emissions in the commercial and residential sectors by making energy efficiency a priority through building code improvements		X		Y
Mitigate Climate Change impacts by integrating climate change research and adaptation planning into County operations and services		X		Y
Reduce Sacramento County's vulnerability to extreme heat events and associated hazards by Increase tree planting/canopy preservation/enhancement		X		Y
<b>Drought Actions</b>				
Implement Water Supply CIP		X		N
<b>Flood, Levee Failure, and Localized Flood Actions</b>				
Keep the PPI current		X		Y
Alder Creek flood control		X		Y
Alder Creek flood mitigation (dam)		X		Y
Alder Creek miners reservoir, property owned by the City of Folsom		X		Y
Delta Small Communities flood protection - structural and nonstructural mitigation		X		Y
Gum Ranch flood control - joint use basin		X		N
Implement Storm Drain CIP		X		N
Laguna Creek at Triangle Aggregate flood control -joint use basins		X		Y
Laguna Creek mitigate flood hazard south of Jackson Highway		X		N
Model Sacramento River levee breach (LAMP) south of Freeport		X		N
Morrison Creek Miners Reach Flood Insurance Study		X		N
Morrison Creek Miners Reach levee improvements		X		N
Outreach stormwatch guide (ALERT, Stormready, weather radio)		X		N
Peak flow floodplain mitigation Arcade Creek near Auburn Blvd		X		N
Risk Map (flood frequency, depth, velocity)			X	Y

Action Title	Complete	Ongoing	Not Started	Project in Plan Update
Elevation & Acquisition Projects (to Mitigate Flood Risk)		X		Y
Repetitive Loss Properties (to Mitigate Flood Risk)		X		Y
Five-Year Capital Improvement Plan – Drainage Projects		X		N
Arcade Creek Corridor Plan		X		N
Elevate Homes on Long Island (Grand Island Road, Sacramento River)	X			Y
Repetitive Loss Church Building on Dry Creek		X		N
South Branch Arcade Creek – Gum Ranch Basin (with Fair Oaks Park District) and Kenneth Avenue Bridge Improvements (with Sacramento County Department of Transportation)		X		Y
Dry Creek Flood Hazard Mitigation Acquisitions with County Regional Park Department			X	N
Arcade Creek at Evergreen Estates Floodwall Improvements		X		N
Linda Creek Peak Flow Mitigation			X	N
Flood Preparation in the American River Parkway		X		Y
Improve County ALERT (Automated Local Evaluation in Real Time) System of Stream and Rain Gauges		X		N
Update County Hydrology Standards		X		Y
Woodside Condominiums Repetitive Flood Loss Property		X		Y
Bridge Replacement on Elk Grove Florin Road at Elder Creek		X		N
Michigan Bar Bridge Replacement at the Cosumnes River		X		N
El Camino Avenue Phase 2 Road Improvements		X		N
Improve Flood Protection and/or Evacuation Planning for Mobile Home/RV Park at Manzanita/Auburn. Alternatively, the Park Should Establish Flood Warning and evacuation procedures.		X		Y
Hydromodification and Stormwater Quality Countywide		X		Y
Evacuation Mapping	X			Y
Regional Flood Management Plan Projects		X		N
<b>River/Stream/Creek Bank Erosion</b>				
Erosion Site Repairs		X		N
<b>Wildfire Actions</b>				
Wildfire Suppression				N
Wildfire Fighting - Support				N
Wildfire Suppression – Regional Parks and Open Space (urban interface)				N
<b>City of Citrus Heights</b>				
Integrate Local Hazard Mitigation Plan into Safety Element of General Plan, as well as other Local Planning Efforts				
Rinconada Flood Wall				

Action Title	Complete	Ongoing	Not Started	Project in Plan Update
Drainage Project Implementation				
<b>City of Elk Grove</b>				
Integrate Local Hazard Mitigation Plan into Safety Element of General Plan, as well as other Local Planning Efforts		X		Y
Mutual Aid Agreements		X		Y
Elk Grove Green Street Project: Repurposing Urban Runoff with Green Instructure Technologies			X	Y
Hazard Education and Risk Awareness		X		N
City of Elk Grove's Storm Drainage Master Plan (SDMP)		X		Y
<b>City of Folsom</b>				
Integrate Local Hazard Mitigation Plan into Safety Element of General Plan, as well as other Local Planning Efforts	X			N
Stormwater Basin Maintenance and Operation Project		X		Y
Alder Creek Watershed Council			X	N
Drainage System Maintenance Tax Assessment			X	Y
Floodplain Mapping		X		N
Redevelopment Area Drainage Improvements		X		Y
Stormwater Basin Maintenance and Operation Project		X		N
Heating and Cooling Centers		X		Y
Public Education/Outreach Extreme Weather		X		Y
Weed Abatement Program		X		Y
Arson Prevention and Control Outreach		X		Y
Wildfire Hazard Identification		X		Y
Ignition Resistant Building Construction Upgrades		X		Y
Wildfire Prevention Outreach		X		Y
<b>City of Galt</b>				
Integrate Local Hazard Mitigation Plan into Safety Element of General Plan, as well as other Local Planning Efforts				
Increase Redundancy/Functionality of Water Wells and Sewer Lift Stations				
Drain Inlet Retrofit Capital Improvement Plan (CIP)				
Creek/Streams Vegetation Management Plan				
Increase Data Capacity of Emergency Frequencies				
<b>City of Isleton*</b>				
Integrate Local Hazard Mitigation Plan into Safety Element of General Plan				
Storm Water Runoff Rehabilitation Project				

Action Title	Complete	Ongoing	Not Started	Project in Plan Update
Wastewater Treatment Plant Pond Levee Elevation Raise to 200-year Flood Standard				
<b>City of Rancho Cordova</b>				
Integrate Local Hazard Mitigation Plan into Safety Element of General Plan	X			Y
Sunrise Boulevard Widening Kiefer to Jackson			X	Y
City of Rancho Cordova Disaster Debris Management Plan	X			Y
Transportation Interconnectivity		X		Y
Intergovernmental Agreement between the County of Sacramento and the City of Rancho Cordova	X			Y
Land Use (Long range)		X		Y
Post disaster training for staff		X		Y
Update/Maintain Emergency Operation Plans (EOPs)			X	Y
Increase Everbridge Enrollment		X		Y
Developing and maintaining a database to track community vulnerability.		X		Y
City Website HMP and City Website, Press Notification, and Social Media Emergency Information		X		N
Building & Safety Division Disaster Inspector Training		X		N
Landscape and Irrigation Requirements/Retro			X	Y
Landscape Ordinance			X	Y
Impervious surface			X	Y
Porous pavement and vegetative buffers			X	Y
Storm Water Pump Station Infrastructure Upgrades		X		Y
SB-5 Urban Level of Flood Protection	X			Y
Channel Vegetation Management and Erosion Control		X		Y
Adoption of Hydromodification and Low Impact Development (LID) Standards	X			Y
Stormwater Capital Improvement Program Master Plan		X		Y
Sunrise Blvd. & Monier Circle Drainage Improvements		X		Y
Roundabouts		X		Y
<b>City of Sacramento</b>				
<b>Multi-Hazard Actions</b>				
Integrate Local Hazard Mitigation Plan into Safety Element of General Plan		X		Y
Coordination with Relevant Organizations and Agencies to Consider the Impacts of Urbanization and Climate Change on Long-Term Natural Hazard Safety		X		Y



Action Title	Complete	Ongoing	Not Started	Project in Plan Update
Maintain and Identify Changes in Critical Facilities GIS Layer to Support Emergency Management Efforts		X		Y
Community Outreach on Multi-Hazard Preparation & Pre-mitigation	X	X		Y
Evaluation and Mitigation of Critical Facilities in Identified Hazard Areas		X		Y
Retrofit of Repetitive Loss Properties			X	Y
Safeguard Essential Communication Services		X		Y
Multi-lingual Disaster Education	X	X		Y
Cal OES Safety Assessment Program Evaluators		X		Y
National Flood Insurance Program & Community Rating System Continuation		X		Y
Coordinate with Sacramento Area Flood Control Agency on Completion of South Sacramento Streams Group Projects	X			N
Develop a Master Generation Plan for Pump Stations		X		Y
Develop a Disaster Housing Plan		X		Y
Disaster Resistant Business Program		X		Y
Develop Enhanced Emergency Planning for Special Needs Populations in the City of Sacramento Emergency Operations Plan and Other Planning Documents		X		Y
Establish a Post-Disaster Action Plan		X		Y
Flood Recovery Plan		X		Y
Public Information Flood Response Plan		X		Y
Construction of a new Emergency Operation Center (EOC)			X	Y
Emergency Operation Center (EOC) Expansion and Information Technology Upgrade		X		Y
Protection of Transportation Infrastructure			X	Y
Public Education Campaign for Everbridge System	X			Y
Regional Emergency and Disaster Preparedness Exercises to Test Operational & Emergency Plans		X		Y
Special Needs and Critical Facilities Database and Advanced Warning System		X		Y
Assets Inventory		X		Y
Protection of City Assets from Cyber Terrorism	X			Y
Protection of City Information Technology Infrastructure		X		Y
Cell Booster	X			N
Travel Time Model for Lower American and Sacramento Rivers and their Major Tributaries		X		Y
Watershed Spill Contamination to Drinking Water Quality: Preparedness for Events and Recovery		X		Y

Action Title	Complete	Ongoing	Not Started	Project in Plan Update
Purchase Drones for Use in Disaster Preparedness, Mitigation, and Response		X		Y
<b>Climate Change Actions</b>				
Map and Assess Vulnerability to Sea Level Rise			X	Y
Emission Study of City Sump and Pump Stations		X		Y
Climate Change Mitigation Actions/Climate Change Adaptation Plan for Drinking Water Quality		X		Y
Harmful Algal Bloom (HAB) Surveillance and Response Planning		X		Y
<b>Drought and Water Shortage Actions</b>				
Aquifer Storage	X			N
Perform a Groundwater Recharge Feasibility Study	X			Y
<b>Earthquake Actions</b>				
Map and Assess Community Vulnerability to Earthquakes	X			N
Seismic Vulnerability Assessment on Sacramento Levees, Infrastructure & Buildings	X			N
Retrofit Historical Buildings		X		Y
<b>Extreme Cold and Heat Actions</b>				
Heating Centers in High Priority Locations		X		Y
Cooling Centers in High Priority Locations		X		Y
Extreme Weather Outreach Strategy		X		Y
Severe Weather Action Plan		X		Y
<b>Flood, Localized Flood, and Levee Failure Actions</b>				
Coordinate with Stakeholder on Proposed Flood Control Project on Magpie Creek		X		Y
Adopt Additional Floodplain Development Standards		X		Y
Drainage Projects for Repetitive Loss Properties		X		Y
Emergency Notification and Evacuation Planning		X		Y
Historic Magpie Creek		X		Y
Natomas Internal Drainage Canals/Levees		X		Y
Drainage Projects from the City's Priority Drainage Project List			X	Y
Projects Identified in the Combined Sewer System Improvement Plan Update		X		Y
Easements for Open Land Along Levees		X		Y
Emergency Management Planning and Levee Security		X		Y
Flood Fighting Equipment	X			Y
Flood Management Land Use Planning and Development		X		Y
Florin Creek Pump at Pomegranate Avenue			X	Y
Internal Drainage System Improvements		X		Y

Action Title	Complete	Ongoing	Not Started	Project in Plan Update
Levee and Structural Flood Management Improvements		X		Y
Master planning to identify facilities needed to prevent 10-year event street flooding and 100-year event structure flooding		X		Y
Retrofit Pumping Plants with Discharge Monitoring Devices		X		Y
Risk Communication and NFIP/CRS Projects		X		Y
Steamers and Rio City Café Floodwalls	X			N
Trash Racks and Debris Cages		X		Y
Multi-Jurisdictional Modeling for Drainage Watersheds Greater Than 10 Square Miles		X		Y
Post-Flood Water Treatment Facility Recovery		X		Y
<b>Wind and Tornado Actions</b>				
Tree Trimming & Debris Removal		X		Y
Upgrading Overhead Utility Lines & Burying Critical Power Lines		X		N
Install Redundancies and Loop Feeds for Power Lines & Infrastructure		X		Y
<b>Erosion Actions</b>				
Stabilization of Erosion Hazard Areas		X		Y
<b>Wildfire Actions</b>				
Implement a Fire Education and Information Program		X		Y
Fuels Reduction on the American River Parkway			X	Y
Outreach on the Effects of Smoke on Air Quality			X	Y
<b>Cosumnes Community Services District</b>				
Flood Response Equipment				
Flood Response Training				
<b>Los Rios Community College</b>				
District Wide Roofing Renovations	X			N
ARC Drainage at Arcade Creek	X			N
Protect District Property		X		N
<b>Metro Fire District</b>				
Relocate the essential facilities in the 200-year flood plain				
Perform seismic study of all district facilities and identify those facilities at greatest risk for earthquake damage.				
Implement a Wildland Urban Interface (WUI) Building/Fire Code				
Develop and Implement a comprehensive WUI fuels management program.				
Deploy 2 remote automated weather stations (RAWS) in Metro Fire jurisdiction				
Defensible space ordinance				

Action Title	Complete	Ongoing	Not Started	Project in Plan Update
<b>Brannan Andrus Levee Maintenance District</b>				
Implement Bioengineered Bank Stabilization techniques				
Development of Dredge Stockpile Site				
Georgiana Slough Waterside Erosion Repair				
Hydrographic surveys and data collection				
Mokelumne River Crown Raising				
San Joaquin River Waterside Erosion Repair				
Sevenmile Slough French Drain and Seepage Berm				
<b>Reclamation District #3*</b>				
Levee Improvements				
<b>Reclamation District #341*</b>				
San Joaquin River Setback Levee/Habitat Bench Multi-Benefit Project, Phase 1				
Complete Projects from Regional Flood Management Plan				
<b>Reclamation District #369</b>				
Pump Station Upgrades and Backup Generators				
Levee Maintenance Program Improvements				
<b>RD 551*</b>				
Levee Improvements				
<b>Reclamation District #554*</b>				
Apply for a Letter of Map Revision (LOMR) to bring the District back into Zone X. (outside of the 100-year flood zone)				
Fill Abandoned Slough				
Geotechnical Investigation				
Snodgrass Slough Levee Improvements				
<b>Reclamation District #556*</b>				
Flood Response Activities, Georgiana Slough Weir				
Georgiana Slough Vegetation Management				
Georgiana Slough Waterside Erosion Repair				
Topographic and Hydrographic Surveys and Data Collection				
<b>Reclamation District #563*</b>				
Rock Slope Protection Project		X		Y
HMP and PL-8499 Levee Improvement Projects		X		Y
<b>Reclamation District #800</b>				
Erosion Repair				Y
Emergency Supplies				

Action Title	Complete	Ongoing	Not Started	Project in Plan Update
<b>Reclamation District #1000</b>				
River Berm and Levee Erosion				N
Erosion Protection Canal Banks				N
Implement Security Measures at Key Facilities				Y
2014 Capital Improvement Plan				N
Implement Supervisory Control and Acquisition Data system (SCADA) on District canals and pump stations				Y
Public Outreach and Education				N
Stockpile and pre-stage flood emergency response materials				N
Emergency response improvements including radios for communications				N
Emergency Back-up Generator for pump stations				N
<b>Reclamation District #1002*</b>				
Geotechnical Investigation				
Snodgrass Slough Levee Improvements				
Snodgrass Slough Vegetation Management				
<b>Reclamation District #1601*</b>				
Levee Improvement Project		X		Y
<b>Reclamation District #2111*</b>				
Rock Slope Protection Project		X		Y
HMP and PL-8499 Levee Improvement Projects		X		Y
<b>Sacramento Regional County Sanitation District</b>				
South River Pump Station Flood Protection Project	X			N
Reduction of Fire Hazard SRCSD Bufferlands		X		Y
<b>Sacramento Area Sewer District</b>				
MOU for Dedicated Cell Phone Tower and Cell Phone Pack		X		N
<b>Southgate Recreation and Park District</b>				
Drought Mitigation Actions/Drought Contingency Plan				Y
Flood Mitigation Actions/Land Acquisition				Y
Conservation Easements				Y
Multi-jurisdictional Cooperation within Watersheds				Y
Storm Water Management Practices – Implement Storm Water Management Practices as identified in Stormwater Quality Design Manual				Y
Severe Weather: Heavy Rains and Storms Mitigation Actions/Tree Management				Y

Action Title	Complete	Ongoing	Not Started	Project in Plan Update
<b>Twin Rivers School District</b>				
New drainage plans to sites within the flood areas including, site drainage, storm drain upgrades and re-grading fields to shed water (on-site) away from buildings			X	P
Work with City/County/Water departments to create defensible spaces at sites where nearby creeks are prone to flooding. Build-up earthen berms (off-site) to shed water away from critically located schools.			X	P
Working with the Department of the State Architect (DSA) on Earthquake Retrofit Plan on all sites.			X	P
Revise and update district-wide Storm Water Prevention Plan		X		P
Create defensible perimeter space – for fire areas. Trees trimmed and vegetation removed to minimize impact during fire season.		X		P

## *Sacramento County Actions*

### Multi-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?):** Completed. However, recommend that when the new LHMP is approved at the Board it be scheduled concurrent with a General Plan amendment round (4 per year) so that the new LHMP can be re-incorporated by reference. Per the State this will be required to maintain our AB 2140 compliance which we currently have.

#### 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?):** OES continues to do outreach using Sacramento Ready (website), notification system, and social media.

#### Increase pedestrian and bicycle evacuation routes by constructing regional bike/pedestrian trail infrastructure, and expanding connection to neighborhoods (particularly in vulnerable 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?):** The 47th project was re-scheduled for construction in 2021.

#### Community Rating System (CRS) Program for Public Information (PPI)

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

#### Flood Insurance Assessment, Awareness, and Promotion

**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 CRS outreach is an annual activity. Since 1979, the only flood insurance available has been the National Flood Insurance Program, now private flood insurance policies are available in California.

#### Public Outreach Mailers

**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 CRS outreach is an annual activity.

#### Toxic Substance Release

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

## Climate Change Actions

Increase average fuel efficiency and reduce GHG emissions from the County Fleet and Fuels

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

Reduce Sacramento County’s vulnerability to Climate Change by reducing GHG emissions in the commercial and residential sectors by making energy efficiency a priority through building code improvements

**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 Office of Planning and Environmental Review (PER) continues to work on the County's Climate Action Plan and Adaptation Strategy. In response to Board direction, an ambitious 12-month workplan has been established to complete the CAP. Additionally, PER prepared the County's first Environmental Justice element of the General Plan which was unanimously adopted by the Board in 2020. The Environmental Justice Element contains policies and implementation measures that seek to improve resiliency in disadvantaged areas by targeting improvements to Environmental Justice communities and developing a County-wide outreach strategy that engages those who have been traditionally or systematically excluded from public participation

Mitigate Climate Change impacts by integrating climate change research and adaptation planning into County operations and services

**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 is ongoing.

Reduce Sacramento County’s vulnerability to extreme heat events and associated hazards by Increase tree planting/canopy preservation/enhancement

**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 is ongoing.

## Drought Actions

Implement Water Supply CIP

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** Continuous progress is being made through construction of Capital Improvement Projects. The projects rehabilitate and upgrade conjunctive use, conservation, production, redundancy, and reliability of the water supply system.



## Flood, Levee Failure, and Localized Flood Actions

### Keep the PPI current

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

### Alder Creek flood control

**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 proposed land development project at Aerojet will include flood control on Alder Creek. The 130 year old gold miner's dam and sediment filled reservoir remains a concern (owned by the City of Folsom).

### Alder Creek flood mitigation (dam)

**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 land developers should be compelled to help the City deal stabilize this situation.

### Alder Creek miners reservoir, property owned by the City of Folsom

**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 fish tissue have been tested for Hg. (see note on action above).

### Delta Small Communities flood protection - structural and nonstructural 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?):** First drafts of the plans for each town will be available for public review in September 2020.

### Gum Ranch flood control - joint use basin

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** Construction by the adjacent land developer.

### Implement Storm Drain CIP

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** Continuous progress is being made through construction of Capital Improvement Projects. The projects rehabilitate and upgrade the storm drain system to reduce flood risk.

### Laguna Creek at Triangle Aggregate flood control -joint use basins

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** Conditional Letter of Map Revision study was submitted to FEMA July 2020. Upon affirmation by FEMA reviewer, staff will reengage the miners in discussions leading to final configuration of the facility.

### Laguna Creek mitigate flood hazard south of Jackson Highway

**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 of Rancho Cordova is aware of the concern.

### Model Sacramento River levee breach (LAMP) south of Freeport

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** There will be more about this reach of levee in the Hood Flood Risk Reduction Plan.

### Morrison Creek Miners Reach Flood Insurance Study

**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 is related to the proposed West Jackson Plan. The facility does provide flood control, as a condition of the original mining permit. Some residents downstream are hoping for new flood insurance rate maps, and reduced cost of flood insurance.

### Morrison Creek Miners Reach levee improvements

**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 is related to the proposed West Jackson Plan.

### Outreach stormwatch guide (ALERT, Stormready, weather radio)

**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 PPI group seeks ways to improve / vary its outreach each year. (See Action #4, above)

### Peak flow floodplain mitigation Arcade Creek near Auburn Blvd

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

### Risk Map (flood frequency, depth, velocity)

**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. This might be a future interest for the

County. The concept of Risk Map is to provide the public with more information than simply being in the 100-year FEMA floodplain.

#### **Elevation & Acquisition Projects (to Mitigate Flood Risk)**

**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 is an active project.

#### **Repetitive Loss Properties (to Mitigate Flood Risk)**

**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 is an active project.

#### **Five-Year Capital Improvement Plan – Drainage 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?):** Continuous progress is being made through construction of Capital Improvement Projects. The projects rehabilitate and upgrade the storm drain system to reduce flood risk.

#### **Arcade Creek Corridor 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 is a reminder that the Arcade Creek Watershed Plan, 2003 includes some opportunities for jurisdictional partnership ([www.saccreeks.org](http://www.saccreeks.org)).

#### **Elevate Homes on Long Island (Grand Island Road, Sacramento River)**

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** Grant funding should be forthcoming, for a 2022 project.

#### **Repetitive Loss Church Building on Dry Creek**

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** Grant funding should be forthcoming, for a 2021 project.

#### **South Branch Arcade Creek – Gum Ranch Basin (with Fair Oaks Park District) and Kenneth Avenue Bridge Improvements (with Sacramento County Department of Transportation)**

**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 action will be amended.

### Dry Creek Flood Hazard Mitigation Acquisitions with County Regional Park Department

**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 yet started.

### Arcade Creek at Evergreen Estates Floodwall Improvements

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** Nothing to report.

### Linda Creek Peak Flow 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?):** Nothing to report.

### Flood Preparation in the American River Parkway

**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 is ongoing.

### Improve County ALERT (Automated Local Evaluation in Real Time) System of Stream and Rain Gauges

**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 system is being maintained, as is.

### Update County Hydrology Standards

**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 study to update the depth-duration-frequency table and the climate change analysis are being peer reviewed by a third-party consultant.

### Woodside Condominiums Repetitive Flood Loss Property

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** FEMA approved two grants to raise up to 90 units at Woodside. The Homeowners Association will soon vote to decide if they want to proceed.

### Bridge Replacement on Elk Grove Florin Road at Elder Creek

**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 Elk Grove Florin Road Widening Project is scheduled for construction in 2020-21. The project includes replacement of the existing, functionally obsolete, bridge at Elder Creek. The bridge replacement is scheduled for completion in 2021.

## Michigan Bar Bridge Replacement at the Cosumnes River

**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 Michigan Bar Bridge Replacement project was re-scheduled for construction in 2022.

## El Camino Avenue Phase 2 Road Improvements

**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 was completed.

Improve Flood Protection and/or Evacuation Planning for Mobile Home/RV Park at Manzanita/Auburn. Alternatively, the Park Should Establish Flood Warning and evacuation procedures.

**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 is still of interest to staff, subject to feedback from the property owners(s).

## Hydromodification and Stormwater Quality 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 is ongoing.

## Evacuation Mapping

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** These are posted on the County GIS (Water Resources page)

## Regional Flood Management Plan 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?):** Project is ongoing.

## River/Stream/Creek Bank Erosion

### Erosion Site Repairs

**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 changes or updates. We currently have no projects in progress or slated. These as noted on your attached are only entered into by WR when it has been determined that there is a flood, safety, or environmental aspect that deems the repair necessary. Most cases are just natural erosion that is inherent of most of our maintained creek.

## Wildfire Actions

### Wildfire Suppression

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

### Wildfire Fighting - Support

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

### Wildfire Suppression – Regional Parks and Open Space (urban interface)

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

*City of Citrus Heights*

**Integrate Local Hazard Mitigation Plan into Safety Element of General Plan, as well as other Local Planning Efforts**

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

**Rinconada Flood Wall**

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

**Drainage Project Implementation**

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

## *City of Elk Grove*

### **Integrate Local Hazard Mitigation Plan into Safety Element of General Plan, as well as other Local Planning Efforts**

**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 2016 LHMP was used and referenced in the development of the 2019 Comprehensive General Plan Update, which included an updated to the Safety Element. Results from this LHMP Update will be reviewed and considered for amendment into the General Plan later in 2021.

### **Mutual Aid Agreements**

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** Between 2016 and 2020, the City took part in eight Mutual Aid Agreements to provide Police Department personnel for emergency events, primarily for wildfire incidents in the region. The City will continue to participate in Mutual Aid Agreements to support emergency response as needed.

### **Elk Grove Green Street Project: Repurposing Urban Runoff with Green Infrastructure Technologies**

**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 implemented due to lack of funding. Grant funding has been applied for but not yet awarded.

### **Hazard Education and Risk Awareness**

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** A number of outreach efforts have been undertaken in recent years to educate the public on natural hazards. This includes articles in the bi-monthly City newsletter related to risk awareness and flood preparedness, social media PSA campaigns on extreme heat, and additional outreach events on flood risk.

### **City of Elk Grove's Storm Drainage Master Plan (SDMP)**

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** Several projects identified in the Storm Drainage Master Plan have been implemented. The completion of the following projects reduced the flood risk for locations around the City.

- Sleepy Hollow Detention Basin Retrofit: Increased stormwater infiltration
- North Camden Drive Storm Drain Improvements: Pipe upsizing
- Storm Drain Pump Station Improvements: Upgraded telemetry
- Blakemore Court and Hartwell Court Drainage Improvements: Pipe upsizing
- Bradshaw/Sheldon Intersection Improvements: New culvert
- Emerald Vista Drive Storm Drain Improvements: Pipe upsizing



## *City of Folsom*

### **Integrate Local Hazard Mitigation Plan into Safety Element of General Plan, as well as other Local Planning Efforts**

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** Yes, this project was implemented. Elements of the LHMP were integrated into the Safety Element of the General Plan most recently updated in 2021, as well as the Emergency Operations Plan most recently updated in 2020. The project certainly reduced risk qualitatively if not quantitatively by highlighting mitigation actions and projects throughout the City.

### **Stormwater Basin Maintenance and Operation 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?):** Yes, this project was implemented. A Stormwater Basin Operation and Maintenance Manual was developed, and a Stormwater Basin Assessment Report was prepared that prioritized the rehabilitation efforts needed as existing basins in the City. A Capital Improvement Project was created and to date four basins have been rehabilitated as noted in the assessment report. Three additional basins are anticipated to be rehabilitated in 2021, with additional basins to follow in subsequent years. Each project reduces the risk of flooding in the City.

### **Alder Creek Watershed Council**

**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, this project has not been implemented to date.

### **Drainage System Maintenance Tax Assessment**

**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, this project has not been implemented to date. Initial compilation of documents and backup data has been conducted by City staff, but to date no Capital Improvement Project has been brought forward to do the necessary public outreach and coordination for a drainage system utility fee to be successful.

### **Floodplain Mapping**

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** Yes, this project was implemented. The City, in coordination with FEMA Region IX, has recently completed updated floodplain modeling and mapping of portions of Alder Creek, Hinkle Creek, Humbug Creek, and Willow Creek. The updated modeling and mapping have been accepted by FEMA and are currently being prepared to be released for public review and comment before becoming effective. Updated effective maps are expected to be available by early 2022.

## Redevelopment Area Drainage Improvements

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** Yes, this project has been implemented and is ongoing. Multiple drainage improvements have been constructed in the Redevelopment Area, including project on Natoma Street, Sutter Street, Bidwell Street, Reading, Street, and others. Each project has reduced risk by improving the capacity and efficient of the storm drainage infrastructure.

## Stormwater Basin Maintenance and Operation 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?):** Duplicate from Action 2 above.

## Heating and Cooling Centers

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

## Public Education/Outreach Extreme Weather

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

## Weed Abatement Program

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

## Arson Prevention and Control Outreach

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

## Wildfire Hazard 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?):** Yes, this project has been implemented and is ongoing.

### Ignition Resistant Building Construction Upgrades

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

### Wildfire Prevention Outreach

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

*City of Galt*

**Integrate Local Hazard Mitigation Plan into Safety Element of General Plan, as well as other Local Planning Efforts**

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

**Increase Redundancy/Functionality of Water Wells and Sewer Lift 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?):**

**Drain Inlet Retrofit Capital Improvement Plan (CIP)**

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

**Creek/Streams Vegetation Management 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?):**

**Increase Data Capacity of Emergency Frequencies**

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

*City of Isleton*

**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?):**

**Storm Water Runoff Rehabilitation 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?):**

**Wastewater Treatment Plant Pond Levee Elevation Raise to 200-year Flood Standard**

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

## *City of Rancho Cordova*

### **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?):** Project was completed in 2018.

### **Sunrise Boulevard Widening Kiefer to Jackson**

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** A section of Sunrise Boulevard south of Kiefer and north of Jackson is subject to localized flooding. This project will raise the road in this area to be above the local flood plain. The design for this project is anticipated to start in 2022 because of funding constraints. This project will be included in the LHMP Update.

### **City of Rancho Cordova Disaster Debris Management 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?):** Plan was completed and submit to CALOES for review. Status of approval is unknown. This project will not be carried forward in this LHMP Update.

### **Transportation Interconnectivity**

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** Work on this project is ongoing with the review of development projects. This project will be included in the LHMP Update.

### **Intergovernmental Agreement between the County of Sacramento and the City of Rancho Cordova**

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** MOU complete. This project will not be carried forward in this LHMP Update.

### **Land Use (Long range)**

**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 task is ongoing. During the development review process, City staff reviews new projects for environmental sensitive areas when submitted to the City. This task will be included in the LHMP Update.

### **Post disaster training for staff**

**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 task is ongoing. It includes OES training and post disaster planning classes/webinars for City staff. The task will be included in the LHMP Update.

## Update/Maintain Emergency Operation Plans (EOPs)

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** Current Emergency Operations Plan was last updated in 2018 and is required to be updated every 5 years, so the next update will be in 2023. This project will be included in the LHMP Update.

## Increase Everbridge Enrollment

**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 task is ongoing. Outreach to citizens/groups via news outlets/City website/kiosk to encourage enrollment. This project will be included in the LHMP Update.

## Developing and maintaining a database to track community vulnerability.

**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 task is ongoing. City GIS staff continues to research, gather, and store GIS data relative to major gas transmission lines and facilities. This project will be included in the LHMP Update.

## City Website HMP and City Website, Press Notification, and Social Media Emergency Information

**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 task did not start because of funding and staffing challenges. The City will develop a 5-year plan to upgrade City owned and operated facilities to include drought tolerant plants in landscaped areas and more efficient irrigation systems. This project will be included in the LHMP Update.

## Building & Safety Division Disaster Inspector Training

**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 is ongoing. This project will not be carried forward in this LHMP Update.

## Landscape and Irrigation Requirements/Retro

**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 is ongoing. This project will not be carried forward in this LHMP Update.

## Landscape Ordinance

**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 task is ongoing. The City will continue to Update and maintain to incorporate proper selection, planting, and maintenance practices into landscape

ordinance. This project will be included in the LHMP Update. In addition, City reviews new development projects for compliance with the MWELo requirements. This project will be included in the LHMP Update.

#### Impervious surface

**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 task is ongoing. The City will continue to limit impervious surfaces within front yard of residential lots. This project will be included in the LHMP Update.

#### Porous pavement and vegetative buffers

**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 task is ongoing. The City will continue to encourage the use of porous pavement, vegetative buffers and islands in large parking areas. This project will be included in the LHMP Update.

#### Storm Water Pump Station Infrastructure Upgrades

**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 started working on this project. The backup generator specifications have been developed. The City is working on design plans for pump stations' site improvements. The project will be completed in the next 2-3 years. This project will be included in the LHMP Update.

#### SB-5 Urban Level of Flood Protection

**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 completed in 2017. The City remapped the 200-year floodplain within City limits. This project will not be carried forward in this LHMP Update.

#### Channel Vegetation Management and Erosion Control

**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 task is ongoing. The City will continue to perform routine weed abatement activities, and complete erosion control and excavation projects as funding allows. This project will be included in the LHMP Update.

#### Adoption of Hydromodification and Low Impact Development (LID) Standards

**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 completed in 2018. The City updated development standards to require new projects to comply with LID and Hydromodification Management requirements. This project will not be carried forward in this LHMP Update.



## Stormwater Capital Improvement Program Master 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 is ongoing. The Master Plan was completed in March 2021. There were a number of flood control and maintenance projects identified in the Master plan that amount to \$60 Million. The City will be implementing the projects identified in the Master Plan for the next 20-30 years. This project will be included in the LHMP Update.

## Sunrise Blvd. & Monier Circle Drainage Improvements

**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. The City submitted a grant application to CALOES to fund the design and construction of the basin. The project will be implemented over the next 3 years. This project will be included in the LHMP Update.

## Roundabouts

**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. The City will continue to encourage roundabouts in place of traffic signals where appropriate. This project will be included in the LHMP Update.

## *City of Sacramento*

### Multi-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?):** A 5-year update of the General Plan is currently underway. City staff will incorporate the City’s LHMP annex into the safety element as part of the general plan update.

#### Coordination with Relevant Organizations and Agencies to Consider the Impacts of Urbanization and Climate Change on Long-Term Natural Hazard Safety

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** On-going effort due to limited resources.

#### Maintain and Identify Changes in Critical Facilities GIS Layer to Support Emergency Management Efforts

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** On-going effort. Construction data from various sources of varying detail. This is the first comprehensive effort of compiling an up-to-date database. No other documentation exists describing data sources. It’s a slow process due to the scope, scale, and complexity of the task, as well as staff’s busy workload. Once complete it will need to be QC’d for completeness and accuracy.

#### Community Outreach on Multi-Hazard Preparation & Pre-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?):** The City continues to participate and host many community outreach events associated with Hazard awareness and preparation. These events include “Capitol Action Day”, “Flood Preparedness Week”, “Highwater Jamboree” Annual Flood Preparedness Event and visiting neighborhood meetings and community events to share preparedness information.

#### Evaluation and Mitigation of Critical Facilities in Identified Hazard 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?):** GIS continues to work with various groups to identify and update the critical facilities that may be affected by a natural disaster.

#### Retrofit of Repetitive Loss Properties

**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 on-going, still working on funding and identifying owners that wish to retrofit their properties. We continue to promote flood insurance as an alternative for now.

## Safeguard Essential Communication Services

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** Maintenance and continued testing of essential communication services includes the City phone system, electronic mail, network services and servers, and critical infrastructure. Resolution underway to protect critical infrastructure to include facilities that house data centers, network services and servers, and our 9-1-1 communications. Information Technology also provides support through ongoing updates, testing, and strengthening of our essential communication services.

## Multi-lingual Disaster 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?):** The City of Sacramento Office of Emergency Management established citywide translation services contracts accessible to all City Departments:

Translation/Interpretation Services	Interlingva, Inc. Instructions	PRC000495
	International Effectiveness Centers Instructions	PRC000519
	NorCal Services for the Deaf and Hard of Hearing Instructions	PRC000428
Translation/Interpretation Services (Telephone Only)	CTS Language Link	PRC000888

Source: City of Sacramento

## Cal OES Safety Assessment Program Evaluators

**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 is an ongoing program that requires continuous recertification of the inspectors and other staff members. The building division is tracking the number of employees who are current SAP evaluators. If training is needed for certification/recertification the staff members are schedule for that training. The city’s participation in this program allows for us to ask for mutual aid from other participating jurisdictions. The loss avoidance for this item would be the avoidance of loss of life. This will keep people out of unsafe structures.

## National Flood Insurance Program & Community Rating System Continuation

**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 of Sacramento continues participation in

this program, always working towards improving our classification status by implementing new programs and projects.

### Coordinate with Sacramento Area Flood Control Agency on Completion of South Sacramento Streams Group 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?):** Project has been completed, several properties were taken out of the floodplain and flood risk has been reduced to the area.

### Develop a Master Generation Plan for 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?):** The City has a robust generator plan but a master plan is still in the process. Sumps that need generators have been identified but the program has been delayed due to funding.

### Develop a Disaster Housing 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?):** Office of Emergency Management to assist with development of a Disaster House Plan. Supplement with OEM Emergency Operations Plan and Pre-Disaster Recovery Plan. Include the City's Office of Innovation and Economic Development as a resource.

### Disaster Resistant Business Program

**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 program has not started due to funding. The goal of this program is to increase community resiliency and avoid financial losses. The economic development department is interested in keeping this action in the next plan update.

### Develop Enhanced Emergency Planning for Special Needs Populations in the City of Sacramento Emergency Operations Plan and Other Planning Documents

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** City OEM includes Access and Functional Needs (AFN) throughout the Emergency Operations Plan (EOP) and Pre-Disaster Recovery Plan. OEM continues to meet with AFN leaders to ensure accessibility and inclusion are maintained in compliance with the Americans with Disabilities Act. OEM plans are updated on a continuous basis and ensure that AFN is included throughout the entirety of the plan. Efforts to strengthen inclusivity continues as OEM networks and attends trainings, seminars, and events pertaining to AFN and diversity.

### Establish a Post-Disaster Action 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?):** City OEM established a Post-Disaster Recovery

Plan that is updated on a continuous basis. City OEM provides direction on Post-Disaster Plans established by the City.

### Flood Recovery 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?):** On-going, discussions need to be had to determine responsible parties.

### Public Information Flood Response 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?):** Use Alert & Warning Guidelines, and keep the same lists as the last LHMP

### Construction of a new Emergency Operation Center (EOC)

**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 has not started, delayed due to COVID-19. Still seeking facility and infrastructure to build out full EOC Capabilities (Keep same information as last LHMP).

### Emergency Operation Center (EOC) Expansion and Information Technology Upgrade

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** Incorporate Citywide inventory management system, upgrade technology equipment for fully functional EOC facility and virtual coordination capacity.

### Protection of Transportation Infrastructure

**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 is not started, but is being carried forward in this Plan Update.

### Public Education Campaign for Everbridge System

**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 program has been implemented and is ongoing, using media, and regular testing of the Everbridge system.

### Regional Emergency and Disaster Preparedness Exercises to Test Operational & Emergency Plans

**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 is an on going task. Issues with social distancing requirements to hold in person trainings and exercises due to covid.

## Special Needs and Critical Facilities Database and Advanced Warning System

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** On-going. Resolution passed and GIS created an app identifying critical infrastructure, title 8 health and safety chapter 8.140 protection of critical infrastructure and wild fire risk areas.

## Assets Inventory

**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 Asset Inventory for the Department of Utilities has been implemented and is an ongoing process. For horizontal assets (typically at grade or below ground such as pipes, valves, etc.), the Operations and Maintenance staff has been collecting and validating asset data as resources allow. Asset inventory completeness depends upon the system, with the inventory for the water system being the most complete and the inventory for the storm drain system being the least complete. DOU utilizes Geographic Information Systems (GIS) and CityWorks, a computerized maintenance management system to track and record horizontal assets, including locations. For vertical assets (facilities, some of which may have below ground components), the Operations and Maintenance staff has been actively collecting and validating asset data for all vertical assets, including Treatment Plants, Wells, Reservoirs, and Sump Stations. DOU utilizes Maintenance Connection, a computerized maintenance management system, to track and record above ground asset data, including locations. The above ground asset inventory is nearly complete and includes information technology equipment, communication equipment, electrical equipment, permanent generators, and machinery. DOU also uses Maintenance Connection to track mobile assets like vehicles, temporary generators, and other heavy equipment and machinery. Hazard identification, which includes information on overhead powerlines, levee crossings, river crossings, etc. for each asset are typically listed in the computer system where the asset resides. The administrative buildings and treatment plants are the only facilities that have office assets such as furniture. Both of the administrative buildings at 35th Avenue, along with the Combined Wastewater Treatment plant were inventoried in 2016. Office assets for these facilities are tracked in a spreadsheet. Office asset inventories for the two Water Treatment Plants and the Meadowview facility still need to occur. By continuing to improve our asset inventories, we are reducing risk by being able to track asset location and condition and repair or replace assets in a timely manner. The completed asset inventories will allow us to identify what has been damaged or lost during a disaster.

## Protection of City Assets from Cyber Terrorism

**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 action item is in place. The City has an information security program in place that follows the NIST cybersecurity framework to protect us from cyber-attacks

## Protection of City Information Technology Infrastructure

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** IT has an on-going process to protect the city's IT

infrastructure from natural disasters. For example, the city's main data center has been moved out of downtown to avoid flood hazards. In addition, under the draft citywide Pre-Disaster Recovery Plan, the city's Office of Emergency Services is currently working on defining citywide critical infrastructure, including critical IT infrastructure. Additional protection gap analyses and implementation steps will follow.

### Cell Booster

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** After thorough research, it was decided that the intermittent issue could be fixed by hardwiring the dispatch consoles rather than using the air cards. That work was conducted and completed in June of 2019. There are no complaints of signal drop since June of 2019.

### Travel Time Model for Lower American and Sacramento Rivers and their Major Tributaries

**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 River Travel Time Tool and the GIS Spill Mapping Tool are available here <http://douapp01/home/spillnotification>, on the DOU River Spill Notification Page. This item is marked “ongoing” in the matrix as these tools are reviewed biannually and updated as needed. However, these are fully functional tools which reduce risk by providing accurate and timely travel time estimates for river spills in the vicinity of the City's drinking water intakes on the American and Sacramento rivers. There are no documented examples of loss avoidance.

### Watershed Spill Contamination to Drinking Water Quality: Preparedness for Events and Recovery

**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 addition to the River Travel Time Tool and the GIS Spill Mapping Tool noted above, the DOU River Spill Notification Page <http://douapp01/home/spillnotification>, includes links to additional tools, information, procedures, and guidelines to for watershed spill response and recovery. In addition, 11/2019 Watershed Spills and WQ Incidents Guidance Binders are a handy, concise reference tool for responding to spills and water quality incidents. This item is marked “ongoing” in the matrix as the information is reviewed biannually and updated as needed. However, these resources reduce risk by providing accurate and effective information on response and recovery to spills in the American and Sacramento River Watersheds. There are no documented examples of loss avoidance.

### Purchase Drones for Use in Disaster Preparedness, Mitigation, and Response

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** DOU / LMA and has an approved Citywide Policy and is developing our procedure, procurement is in the purchase process of the UAV's for the inspections and emergency response to critical infrastructure (levee's) The LMA is in joint coordination and training efforts with Sacramento City Fire and Police.



## Climate Change Actions

### Map and Assess Vulnerability to Sea Level Rise

**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 due to lack of funding sources.

### Emission Study of City Sump and 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?):** DOU has started doing Department wide GHG inventorying. This action can be addressed in the upcoming Sustainability Action Plan, meaning high level recommendations. From there, projects and funding can be identified. The focus will be on replacement and new projects to upgrade to cleaner and newer emissions.

### Climate Change Mitigation Actions/Climate Change Adaptation Plan for Drinking Water Quality

**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 effects of climate change on water quality is discussed in the City’s most recent Watershed Sanitary Survey Updates for the American River Watershed (2018) and the Sacramento River Watershed (2020). The Water Quality Laboratory and R&D section of DOU is researching the impact of wildfire related runoff on water quality in the vicinity of the City’s drinking water intakes on the American and Sacramento Rivers. The City’s membership in the Water Research Foundation supports cutting-edge academic research on climate change adaptation and climate change mitigation for water utilities. Current planning for the eventual expansion of the Sacramento River Water Treatment Plant includes elements for climate changes adaptation, such as the consideration of ozone disinfection.

### Harmful Algal Bloom (HAB) Surveillance and Response 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?):** The City, in coordination with agency partners, monitors for algal cyanotoxins in raw water at the intakes to our water treatment plants on the American and Sacramento Rivers and in the treated water produced by the treatment plants. This item is marked as “ongoing” in the matrix as the monitoring is on an annual schedule. The program reduces risk by screening for the presence of algal cyanotoxins in the City’s source waters and by demonstrating the removal efficiency of the water treatment process on alga cyanotoxins, should any be detected. There are no documented examples of loss avoidance.



## Drought and Water Shortage Actions

### Aquifer Storage

**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 was included in the groundwater master plan. Also, DOU funded a regional ASR study that was just completed by the Regional Water Authority.

### Perform a Groundwater Recharge Feasibility Study

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** We evaluated conjunctive use (flexible operation between surface water and groundwater in our groundwater master plan. This would be “inlieu” recharge where you rely on surface water while the aquifer naturally recharged. We also considered a few direct recharge possibilities. The region is in the middle of creating the groundwater sustainability plan. That is a much more ambitious undertaking. Our internal work is complete. The collective work is ongoing.

## Earthquake Actions

### Map and Assess Community Vulnerability to Earthquakes

**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 part of DWR’s levee evaluations program, the following GIS layer was created <http://ferix.water.ca.gov/lep/> . The GIS layer identifies subsurface exploration locations and points of existing vulnerabilities. GERs for each study area can also be download from the website. Screening-level static analyses and screening-level seismic analyses were done on levees surrounding the Sacramento River, American River, NEMDC, and Natomas.

### Seismic Vulnerability Assessment on Sacramento Levees, Infrastructure & Buildings

**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 California Department of Water Resources (DWR) Division of Flood Management conducted a levee evaluations program to assess the existing conditions of levees in California’s Central Valley from 2008 to 2015. Levees in each reach/sub-reach were analyzed for six static ULE criteria at the 200-year WSE: erosion risk (i.e., risk of levee breach due to erosion), freeboard, through seepage, under-seepage, landside slope stability, and waterside slope stability. In ULE, analyses were not performed for local discontinuities or penetrations. In addition, a seismic vulnerability evaluation was performed using a 200-year return period seismic event. The results of the assessment were used to classify intermittently loaded levees as having high, medium, or low vulnerability with respect to post-seismic flood protection ability. The reaches/sub-reaches that did not meet static ULE criteria were further evaluated to identify conceptual remedial alternatives. Typical conceptual static remedial alternatives consisted of installing cutoff walls along the centerline of the levees to address seepage and stability deficiencies, placing waterside rock slope protection for erosion and waterside slope stability deficiencies, and localized freeboard repair.

## Retrofit Historical Buildings

**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 continues to encourage seismic retrofitting of buildings. From the 2035 General Plan:

- the maintenance/repair of historic structures (HCR 2.1.7)
- the adaptive reuse of idled historic buildings (HCR 2.1.14) (something that generally triggers structural retrofit through Building division permitting processes)
- discourages needless demolitions (HCR 2.1.15)
- promotes the education of the public about the value of historic preservation and the protection and reuse of historic buildings (actions of which can lead to seismic retrofit in some instances) (HCR 3.1.4)

## Extreme Cold and Heat Actions

### Heating Centers in High Priority Locations

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** Currently, the City uses the County’s Severe Weather Guidance as the trigger to activate warming or cooling or clean air centers. Centers are activated in impacted areas throughout the City, using Community Centers (YPCE) or the Library, or other facilities operated by non-government organizations.

### Cooling Centers in High Priority Locations

**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 uses the County’s Severe Weather Guidance as the trigger to activate warming or cooling or clean air centers; however the City also tends to follow National Weather Service and Public Health recommendations and will activate during Excessive Heat Warnings. Centers are activated in impacted areas throughout the City, using Community Centers (YPCE) or the Library, or other facilities operated by non-government organizations. If cooling centers are open at faith-based and other community facilities, the list is posted at [211sacramento.org](http://211sacramento.org) or is available by calling 2-1-1.

### Extreme Weather Outreach Strategy

**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 uses the media, Everbridge, and other Alert & Warming Capabilities to provide outreach.

### Severe Weather Action 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?):** Currently, the City uses the County’s Severe Weather Guidance as the trigger to activate warming or cooling or clean air centers. The City is currently

analyzing the need to enhance and adapt the guidance to tailor to the needs of the City areas impacted by large, unhoused communities.

### Flood, Localized Flood, and Levee Failure Actions

#### Coordinate with Stakeholder on Proposed Flood Control Project on Magpie Creek

**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 on-going. Lead agency is USACE with SAFCA and City of Sacramento as the non-federal sponsors. The America Common Features Reach I (Magpie Creek) diversion Channel Levee improvements project is at 35 % design stage with an estimated construction time in 2022.

#### Adopt Additional Floodplain Development Standards

**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 still on-going. We continue to develop and adopt new standards as needed due to changing regulations.

#### Drainage Projects for Repetitive Loss Properties

**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 on-going, since the City currently has 18 repetitive loss properties. More projects are needed to mitigate for these losses. In 2017 a property located in Drainage Basin 31 was removed from the repetitive loss area list due to two projects that were implemented by the Department of Utilities. These projects eliminated property damage by removing the excess peak flow from 65th Street to Sump 31. The two projects are Sump 31 Discharge Pipeline (completed 2001) and Basin 31 Detention Basin at 65th Street and Broadway (completed 2010).

#### Emergency Notification and Evacuation 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?):** In the event of an evacuation, and depending on the event, emergency notifications will be released using the Everbridge System and our Public Information Office. The Office of Emergency Management acts as the liaison and assists the City’s Police Department operations to orchestrate the evacuation, Sacramento Fire provides the medical response and assists with community alerts, and YPCE provides sheltering should there be a need. In the event it is a flood related evacuation, the DOC activates and serves as the incident command center.

#### Historic Magpie Creek

**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 is on-going. The Magpie Creek Diversion Channel is part of the Corps levee improvement project under the WRDA 16 authorization. This reach of the project should be completed in 2024. The work consists of cutting off all (or the majority) of the spill into historic Magpie and keeping it contained in the diversion channel as it heads north then west

## Natomas Internal Drainage Canals/Levees

**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 on-going. DOU currently has a contract with KSN to provide the evaluation and certification of the interior levees in the Natomas Basin. The recertification will need to be submitted to FEMA prior to 2025.

## Drainage Projects from the City’s Priority Drainage Project List

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** These projects have not started. Due to funding issues related to the drainage fund, DOU/Drainage CIP has not updated the list of drainage improvement projects since 2016.

## Projects Identified in the Combined Sewer System Improvement 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?):** The long term control plan (LTCP) works towards the 5yr/10yr/100yr goals in the CSS. The CSS improvement plan identified 28 projects and 3 programs. The LTCP is implementing the 20% of the projects and all of the programs. So far one project has been completed and that is 9th Street. The rest on the list below are in progress. The report has a schedule of when the rest of the projects will be completed.

Project No.	Project Name	Current Status (As of March 2021)
X14010097	Existing CS Optimization	Design 60%
X14010098	Freeport Sewer Improvement - Bidwell and Freeport	Out to Bid
X14010042	9th Street Sewer Replacement G to L Street	Complete
X14010104	McKinley Park CS Storage Facility	Construction
X14170107	W and 25th Street Storage	Pre-Design
X14170106	24th Street Storage	Pre-Design
I14610304	RDII Pilot Program	Planning
I14610303	GI Pilot Program	Planning
Program	Water Conservation Program	Implementation

Source: City of Sacramento

## Easements for Open Land Along Levees

**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 on-going. An analysis of current levee easements and setback to determine where additional and future easements will be needed is still on-going as well as developing a method and funding source to acquire the needed easements and open space to meet the ULDC standards.

## Emergency Management Planning and Levee Security

**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 on-going. A Flood Exercise Seminar was conducted in October of 2020 to train on the newly developed department’s Emergency Operations Plan and to test the DOC Guidelines document. From the exercise, we are currently conducting training for all of the DOC participants on the key points of both documents. The data collected will be determined how the September 2021 exercise will be presented. In addition, we are working on the update to our Business Continuity Plan which could serve beneficial during a flood disaster.

The City currently has an OM Manual, with security portion from the South Sac Streams Interim, an original Sacramento River OM Manual and info on Levee Security from DHS. Also, we use a Security Awareness Guide for Levees from DHS. A more detailed Levee Security plan is needed.

## Flood Fighting Equipment

**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 mitigation Action was completed:

- Landing Craft is in the build process
- Excavator and trailer have been purchased
- 20,000 sand bags
- Misc. stakes, twine, visqueen
- Approx. 2,000 tons of Rip Rap
- Flood Warehouse Forklift
- UAS Survey Drone for Levee Inspections
- DOU has two DWR Conex Boxes staged at NACY full of Flood Fight Supplies

## Flood Management Land Use Planning and Development

**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 on-going. As part of the 2040 General Plan Update, staff will be evaluating potential new floodplain management policies.

## Florin Creek Pump at Pomegranate Avenue

**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 was not completed. A grant application was submitted to the state but were denied, no funding was available for this project.

## Internal Drainage System Improvements

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** Due to lack of drainage rate adjustment, there has been no funding to implement improvement projects. Some work has been done on drainage basin master

plans - Basin 33/34, Basin 129, and Basin 147. The models for Basin 54 and North Natomas Basins 5, 6, and 8a. have also been updated.

### Levee and Structural Flood Management Improvements

**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 on-going. There are currently six federally authorized projects that are being implemented to reduce flood risk to the Sacramento area:

- Natomas Levee Improvement Project-current On-going with active construction
- American River Common Features-current On-going with active construction
- Folsom Dam Modifications/Joint Federal Project- Complete ( just some O&M issues to address – fully functional)
- Folsom Dam Raise Project- On-going with active construction
- South Sacramento Streams Group Project (Federal Project)-Complete – Fully functional some minor grading activities remain
- Sacramento River Bank Protection Program-Currently being done under WRDA 2016 ARCF authorization

Other efforts are ongoing:

- SAFCA levee accreditation for FEMA level of protection
- Regional planning as part of the Central Valley Flood Protection Plan
- USACE-CVFPB-SAFCA General Reevaluation Report (GRR) planning for 200-year flood protection for Sacramento area
- SAFCA and City plan development for 200-year flood protection to meet state requirements for Urban Level of Protection and Urban Levee Design Criteria

### Master planning to identify facilities needed to prevent 10-year event street flooding and 100-year event structure flooding

**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 is on-going due to funding issues. Two new master plans were developed, Basin 147 and Basin 129. Will continue to develop master plans to identify facilities needed to prevent 10-year event street flooding and 100-year event structure flooding in areas of the City that do not currently have master planning. Projects will be prioritized and will formulate timeline for the identified projects

### Retrofit Pumping Plants with Discharge Monitoring Devices

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** Since 2016, Dou has installed flow meters at one drainage pump station, Sump 141. Currently DOU is funding a study this year to evaluate alternative flow meter technologies to meter our Drainage stations. This study will recommend a pilot installation of one or more-meter technologies at our drainage pump stations. Based on the results from the pilot installations, a drainage metering program will be proposed. A project/study report will be reviewed by the end of April.

## Risk Communication and NFIP/CRS 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?):** On going – City continues to participate in NFIP/CRS programs as well as PPI which provides risk communication to the public

## Steamers and Rio City Café Floodwalls

**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 has been completed. This project resulted in increased flood protection thereby decreasing the likelihood of loss of life and property. The repair included removal of the existing wood fascia boards on both sides and top of the existing flood wall, and replacement with new wood on the easterly (land) side, and new wood on the top of the floodwall to match the existing height. The westerly (river) side of the wall will remained exposed concrete.

## Trash Racks and Debris Cages

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** On-going due to funding issues. A study has begun to evaluate the effectiveness of antiquated trash racks at two pump stations and one ditch location. Once these studies are completed, estimated June 2021, the City will make recommendations to more effectively remove trash and debris at these locations. A larger effort is dependent on resources and funding availability

## Multi-Jurisdictional Modeling for Drainage Watersheds Greater Than 10 Square Miles

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** On-going project. Currently, a Natomas Basin drainage study is underway via joint efforts from RD 1000, County of Sacramento, and City of Sacramento. The Parties wish to prepare a Letter of Map Revision (LOMR) for the Natomas Basin internal floodplain as part of an exterior levee certification project; and have determined that the existing model of the Natomas Basin internal floodplain requires an update in order to meet their current needs.

## Post-Flood Water Treatment Facility Recovery

**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 11/2019 Watershed Spills and WQ Incidents Guidance Binders are a handy, concise reference tool intended for responding to spills and water quality incidents. However, the information, and guidance contained in the binders is also applicable to floodwater contamination at the treatment plants. This item is marked “ongoing” in the matrix as the information in the binders is reviewed biannually and updated as needed.



## Wind and Tornado Actions

### Tree Trimming & Debris Removal

**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 Urban Forestry Section of Public Works provides continuous maintenance to trees located within the public right of way and responds to all reports of tree related impacts to the right of way. Emergency service is available 24 hours a day 7 days a week. Additional staff and equipment can be mobilized during extreme weather events to meet the needs of the situation.

### Upgrading Overhead Utility Lines & Burying Critical Power Lines

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** Over the next several months and through the first quarter of 2021 SMUD will be performing a series of maintenance and reliability enhancements. There are a total of 13 reliability enhancements. Project will reduce the number and duration of power outages and provide reliable electrical service

### Install Redundancies and Loop Feeds for Power Lines & Infrastructure

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** SMUD is in the process of constructing two new Substation to serve midtown and downtown areas. Substation E is scheduled for construction through 2021. Substation H is in the proposal stage. The projects will improve energy reliability and capacity

## Erosion Actions

### Stabilization of Erosion Hazard 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 is on-going. The US Army Corp of Engineers has headed the Sacramento River Bank protection Project and this mitigation action will be channeled through them as an expansion to their ongoing efforts

## Wildfire Actions

### Implement a Fire Education and Information Program

**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 is ongoing and will be included in this Plan Update.



### Fuels Reduction on the American River Parkway

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** Funding and resources are not available at this time.

### Outreach on the Effects of Smoke on Air Quality

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** See the County’s new Hazardous Air Quality Annex, under the Severe Weather Guidance Plan

*Cosumnes Community Services District*

**Flood Response Equipment**

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

**Flood Response Training**

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

## *Los Rios Community College*

### **District Wide Roofing Renovations**

**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 completed. An integrated foam system was utilized to make the existing roof system structures more weather resistant, reducing the permeability of the roof material and adding protection from rainwater penetrating the existing equipment located on buildings' rooftops.

### **ARC Drainage at Arcade Creek**

**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 completed including regrading the land next to Arcade Creek to have overflow from the creek flow back into creek area as well as land improvements made during development of adjacent athletic fields. This has minimized the likelihood of localized flooding from Arcade Creek during the rainy season to reach critical facilities and damage campus buildings.

### **Protect District Property**

**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 action is ongoing in nature. Addressing potential localized flooding issues are assessed in conjunction with infrastructure improvements and construction projects as they occur. This work is incorporated into the planning process through capital improvement projects. LRCCD examines avenues to discover ways to improve localized flooding risk to property, buildings, parking lots, and road closures that would impact student access, displace instruction, and cause costly cleanup or repairs.

## *Metro Fire District*

Relocate the essential facilities in the 200-year flood plain

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

Perform seismic study of all district facilities and identify those facilities at greatest risk for earthquake damage.

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

Implement a Wildland Urban Interface (WUI) Building/Fire Code

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

Develop and Implement a comprehensive WUI fuels management program.

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

Deploy 2 remote automated weather stations (RAWS) in Metro Fire jurisdiction

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

Defensible space ordinance

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

*Brannan Andrus Levee Maintenance District*

Implement Bioengineered Bank Stabilization techniques

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

Development of Dredge Stockpile Site

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

Georgiana Slough Waterside Erosion 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?):**

Hydrographic surveys and data collection

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

Mokelumne River Crown Raising

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

San Joaquin River Waterside Erosion 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?):**

Sevenmile Slough French Drain and Seepage Berm

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

### *Reclamation District #3*

#### Levee Improvements

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

*Reclamation District #341*

San Joaquin River Setback Levee/Habitat Bench Multi-Benefit Project, Phase 1

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

Complete Projects from Regional Flood Management 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?):**

*Reclamation District #369*

**Pump Station Upgrades and Backup Generators**

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

**Levee Maintenance Program Improvements**

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



*Reclamation District #551*

Levee Improvements

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

### *Reclamation District #554*

Apply for a Letter of Map Revision (LOMR) to bring the District back into Zone X. (outside of the 100-year flood zone)

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

### *Fill Abandoned Slough*

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

### *Geotechnical Investigation*

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

### *Snodgrass Slough Levee Improvements*

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

*Reclamation District #556*

Flood Response Activities, Georgiana Slough Weir

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

Georgiana Slough Vegetation 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?):**

Georgiana Slough Waterside Erosion 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?):**

Topographic and Hydrographic Surveys and Data Collection

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

## *Reclamation District #563*

### Rock Slope Protection 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?):** Project is ongoing and will be carried forward in this Plan Update.

### HMP and PL-8499 Levee Improvement 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?):** Project is ongoing and will be carried forward in this Plan Update.

*Reclamation District #800*

Erosion 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?):**

Emergency Supplies

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

## *Reclamation District #1000*

### River Berm and Levee 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?):**

### Erosion Protection Canal Banks

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

### Implement Security Measures at Key Facilities

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

### 2014 Capital Improvement 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?):**

### Implement Supervisory Control and Acquisition Data system (SCADA) on District canals and 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?):**

### Public Outreach 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?):**

### Stockpile and pre-stage flood emergency response materials

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

### Emergency response improvements including radios for communications

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

### Emergency Back-up Generator for 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?):**



*Reclamation District #1002*

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

**Geotechnical Investigation**

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

**Snodgrass Slough Levee Improvements**

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

**Snodgrass Slough Vegetation 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?):**



*Reclamation District #1601*

Levee Improvement 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?):** Project is ongoing and will be carried forward in this Plan Update.

## *Reclamation District #2111*

### Rock Slope Protection 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?):** Project is ongoing and will be carried forward in this Plan Update.

### HMP and PL-8499 Levee Improvement 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?):** Project is ongoing and will be carried forward in this Plan Update.

## *Sacramento Regional County Sanitation District*

### **South River Pump Station Flood Protection 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 South River Pump Station (SRPS) Flood Protection Project was completed in 2018. The Project consisted of constructing a new flood protection levee and a raised all-weather access road around the existing SRPS. The ring levee and raised access road consist of a 22-foot high, 160-foot wide bottom width, earthen embankment that surrounds the SRPS and provides access from South River Road in the event that flooding occurs. The newly constructed flood protection system is designed to provide a minimum of 200-year level of protection.

### **Reduction of Fire Hazard SRCSD Bufferlands**

**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 Reduction of Fire Hazard to the Regional San Bufferlands is an ongoing annual project that consistently helps to reduce wildfire risk to the property.

*Sacramento Area Sewer District*

**MOU for Dedicated Cell Phone Tower and Cell Phone Pack**

**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 will not be carried forward in this Plan Update.

## *Southgate Recreation and Park District*

### **Drought Mitigation Actions/Drought Contingency 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?):**

### **Flood Mitigation Actions/Land Acquisition**

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

### **Conservation Easements**

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

### **Multi-jurisdictional Cooperation within Watersheds**

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

### **Storm Water Management Practices – Implement Storm Water Management Practices as identified in Stormwater Quality Design Manual**

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

### **Severe Weather: Heavy Rains and Storms Mitigation Actions/Tree 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?):**

## *Twin Rivers School District*

New drainage plans to sites within the flood areas including, site drainage, storm drain upgrades and re-grading fields to shed water (on-site) away from buildings

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** District does not have any sites in flood areas that require new drainage plans.

Work with City/County/Water departments to create defensible spaces at sites where nearby creeks are prone to flooding. Build-up earthen berms (off-site) to shed water away from critically located schools.

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** District will identify sites where nearby creeks are prone to flooding and assess if modifications need to be made to create defensible spaces.

Working with the Department of the State Architect (DSA) on Earthquake Retrofit Plan on all sites.

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** District previously reached out to DSA regarding Earthquake Retrofit Plans on all sites and this is pending further direction from DSA.

Revise and update district-wide Storm Water Prevention 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 District revises and updates the Storm Water Prevention Plans as needed per project (for projects over 1 acre).

Create defensible perimeter space – for fire areas. Trees trimmed and vegetation removed to minimize impact during fire season.

**Progress to Date (Consider: Was the project implemented – why or why not? Did the project reduce risks? Can you provide evidence of loss avoidance?):** : District's Maintenance/Grounds Department trims trees and removes vegetation at sites on an ongoing basis.