

ANNUAL REPORT
on the
MITIGATION ACTIONS
in the
SACRAMENTO COUNTY
LOCAL HAZARD MITIGATION PLAN
Dated December 2016
(AND FLOODPLAIN MANAGEMENT PLAN)

**Adopted County Board of Supervisors on July 11, 2017, Resolution 2017-0502
and the Plan was Approved by FEMA August 18, 2017**

Contact:
George Booth (916)874-6484
County of Sacramento
Department of Water Resources

April 2, 2018

The Local Hazard Mitigation Plan is posted on the Internet at www.Stormready.org

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The County of Sacramento developed the initial Hazard Mitigation Plan in 2005 and the plans are updated on a five-year cycle, this being the second update. The Plan was prepared pursuant to the requirements of the Disaster Mitigation Act of 2000 (Public Law 106-390 and 44 CFR §201.6). The 2016 Plan is posted on the Internet at www.StormReady.org (click: Local Hazard Mitigation Plan).

A public planning committee as established pursuant to Board of Supervisors Resolution 2016-0091, February 9, 2016, collaborated to prepare the Hazard Mitigation Plan. Annually, a report is prepared and presented to the public describing progress on the hazard mitigation measures in the Plan, as required by the FEMA National Flood Insurance Program Community Rating System Activity 510. This annual report will be posted online under the Local Hazard Mitigation Plan page at www.StormReady.org.

The 5-year plan allows each participating city, district or agency to prioritize mitigation measures, and to amend, add, or deleted activities.

PLAN PARTICIPANTS

The Sacramento County Local Hazard Mitigation Plan (LHMP) Update is a multi-jurisdictional plan that geographically covers the entire area within Sacramento County's jurisdictional boundaries (hereinafter referred to as the planning area). The following jurisdictions participated in the planning process and have adopted the Local Hazard Mitigation Plan Update:

- Sacramento County
- Sacramento County Water Agency
- Sacramento Area Sewer District
- Sacramento Metro Fire District
- Sacramento Regional County Sanitation District
- City of Citrus Heights
- City of Elk Grove
- City of Folsom
- City of Galt
- City of Isleton
- City of Rancho Cordova
- City of Sacramento

Grand Island RD 3
Sherman Island RD 341
Libby McNeil RD369
Pierson District RD551
Walnut Grove east RD554
Upper Andrus Island RD556
Tyler Island RD563
Cosumnes River RD800
Natomas RD1000
Glanville Tract RD1002
Twitchell Island RD1601
Dead Horse Island RD2111
Brannan Andrus Levee Maintenance District (RD 317, 407, 2067)
Southgate Recreation and Park District
Twin Rivers School District
Los Rios Community College District
Sac-Metro Fire
Cosumnes Community Services District Fire Department

OVERVIEW

Damage caused by natural disasters seems to be increasing every decade. Congress seeks to encourage local communities to reduce risk, thus the Disaster Mitigation Act of 2000. The first Sacramento County Local Hazard Mitigation Plan was adopted in 2005. The federal Disaster Mitigation Act requires periodic updates to the local hazard mitigation plan to maintain eligibility for pre-disaster mitigation grant funds and some post-disaster public assistance through FEMA. The first update was dated 2011, and the current Plan is dated December 2016. Each update includes community discussion about natural hazards, risk, and mitigation activities.

The 2016 Plan update was an inclusive effort inviting participation from the public, all seven cities within Sacramento County many agencies and districts. **Exhibit A** is a final notice from FEMA listing all of the jurisdictions who adopted the Plan.

The complete Sacramento County Local Hazard Mitigation Plan is posted on the Internet at www.Stormready.org, click on Local Hazard Mitigation Plan.

As a requirement of the Hazard Mitigation Act and the FEMA Community Rating System, the status of the mitigation activities is reported annually. This report highlights the progress made in the implementation of the mitigation goals and strategies outlined in Sections 5 of the Plan. This annual report pertains to the activities of the County of Sacramento and the Sacramento County Water Agency.

HELPFUL DEFINITIONS

- **Community Rating System (CRS)** -The National Flood Insurance Program's (NFIP) Community Rating System (CRS) is a voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum NFIP requirements. As a result, flood insurance premium rates are discounted to reflect the reduced flood risk resulting from the community actions meeting the three main goals of the CRS: (1) reduce flood losses; (2) facilitate accurate insurance rating; and (3) promote the awareness of flood hazards and flood insurance.
- **County**, as used herein, is the unincorporated Sacramento County.
- **FEMA** is the Federal Emergency Management Agency, a division of the United States of America Department of Homeland Security.
- **Floodplain** is an area mapped or otherwise determined as being subject to inundation by ponding or flowing water in a storm event that has a statistical probability equal to or greater than 1% per year (also known as the 100-year floodplain). Other floodplains include 0.5% per yr (200-year) and 0.2% per yr (500-year).
- **Floodplain Manager** is the Director of the Sacramento County Department of Water Resources.
- **Repetitive Loss Area** has one or more structures having experienced two or more floods in a ten-year period, with flood claims exceeding \$1,000 in each instance.

COMMUNITY RATING SYSTEM

The County is a member in good standing with the FEMA National Flood Insurance Program Community Rating System (CRS), administered by Insurance Services Office, since 1992. There are about 86 communities (cities and counties) in the State of California who voluntarily participate in the CRS program, with the median rating of

Class 7. Sacramento County, rated CRS Class 2 in May 2017, is second in the State, behind the City of Roseville (the nation's only Class 1 community). There are only six Class 2 communities in the nation.

CRS is a reward-based program to encourage communities to do a better job of managing floodplains and informing the public of flood hazard risk and mitigation measures. Due to the County's rating, owners of structures in FEMA special flood hazard area receive up to a 40% discount on flood insurance premiums. This totals more than \$1 million in annual savings to our constituents.

Saving hundreds of dollars on flood insurance premiums is significant to households. The other obvious benefits of active CRS participation are reduced flood risk to existing structures and sustainable new development. Excluding the normal business of managing floodplains and drainage systems, Water Resources' spends about \$70,000 annually to participate in CRS, thus leveraging significant return to the public.

The CRS program is a system of measurements reviewed every three years and affirmed annually, including:

- Elevation certificates (used to accurately describe the flood risk on a structure by structure basis)
- Map information (keeping flood hazard information and making it available to the public)
- Outreach projects (regular flood hazard and mitigation reminders to the public)
- Hazard disclosure (helping real estate professionals, buyers, and sellers to recognize the flood hazards)
- Flood protection information (provide mitigation and safety information to the public)
- Additional flood data (improving upon the FEMA regulatory maps)
- Open space preservation (the County maintains the expansive south county floodplain as predominately agricultural land use)
- Higher regulatory standards (credits standards such as requiring buildings to be safely above flood hazards 'freeboard')
- Flood data management (recognition of long-standing effort to map high water and local flood hazards)
- Storm water management (credit for applying local, state, and federal storm water pollution reduction requirements)
- Repetitive loss (annual outreach stressing flood insurance and mitigation measures to those who have flooded multiple times)

- Floodplain management planning (credit for annually updating and publishing this report)
- Acquisition and relocation (recognizes efforts to mitigate the most flood-prone structures)
- Flood protection (recognizes efforts to mitigate flood hazard on a property by property basis)
- Drainage system maintenance (reviews ongoing efforts to maintain and improve the storm drainage systems)
- Flood warning program (this is an area where the County can obtain more credit in the future)

*Reference CRS <https://www.fema.gov> search Community Rating System
The complete CRS Manual is available at www.crsresources.org

ANNUAL REPORT REQUIREMENTS

This Annual Report includes:

1. A description of how the evaluation report was prepared and how it is submitted to the governing body, released to the media, and made available to the public;
2. How the reader can obtain a copy of the Countywide Natural Disaster Mitigation Plan;
3. A review of each recommendation or action item in the action plan or area analysis report, including a statement on how much was accomplished during the previous year;
4. A discussion of why any objectives were not reached or why implementation is behind schedule; and
5. Revisions to existing recommendations or proposed new ones.

OUTREACH ACTIVITIES

1. This report is sent directly to each of the five County Supervisors, who also serve as the Board of Directors of the Sacramento County Water Agency.
2. This report is sent to the Water Resources Public Information Officer for preparation of a press release and Internet posting.
3. Annually, outreach brochures are inserted in the County utility bills and an additional brochure is direct-mailed to properties in a floodplain. These brochures direct the reader to www.stormready.org, where they can find this report, the Hazard Mitigation Plan, and Water Resources contact information.
4. Water Resources engages regularly with other agencies, departments, districts, cities, and the public to discuss progress. Editorial comments should be directed to George Booth (916)874-6484, boothg@saccounty.net
5. Drainage questions should be directed to 3-1-1
6. Flood zone questions should be directed to (916) 874-7517 or questions may be emailed via www.stormready.org
7. The Sacramento County Local Hazard Mitigation Plan update may be viewed at www.SacCounty.net (search: local hazard mitigation plan)

GENERAL LOCAL FLOODPLAIN MANAGEMENT GOALS

MITIGATION OF REPETITIVE FLOOD LOSSES

Sacramento County has 28 repetitive flood loss areas described in Appendix G of the Local Hazard Mitigation Plan. In some cases, a drainage improvement can be made to reduce the risk of flooding; however, many homeowners should consider flood proofing their home. For example, FEMA grant funding is periodically available to assist financially with mitigation projects. Property owners are encouraged to contact Water Resources to consider what mitigation project might best suit their needs.

CRS requires annual outreach. The letter from the County Department of Water Resources encourages owners of repetitive flood loss properties to contact staff for technical assistance relevant to their specific flood concern. Water Resources

engineering staff is always willing to meet with property owners to help them to understand the source of flooding and ways to reduce the risk.

Possible mitigation measures, to reduce flood risk, include:

- Acquisition/demolition – This alternative may be appropriate in areas of egregious flooding, such as flood-prone residential structures within a high velocity floodway.
- Elevation – Lifting structures so that the floor is safely above the flood hazard and the foundation is constructed of flood resistant materials in a manner that would resist the hydraulic and hydrostatic forces is an excellent way to mitigate future flood losses. The Department of Water Resources assisted in the raising of 70 homes, 27 of which were repetitive loss properties.
 - There are pending FEMA grant applications for numerous home elevation projects throughout Sacramento County
- Flood-proofing – There are often mitigation measures taken by individual property owners to reduce the risk of flood damage such as walls, berms, sump pumps, overland release routing, and features to seal doorways and other entrances.
- Physical improvements- In some cases, there are things that the property owner can do on-site such as directing shallow floodwater away from a flood-prone structure. In other cases, there are drainage improvement projects that can be constructed by Water Resources staff.

HELPING PEOPLE UNDERSTAND FLOOD RISK

It is reasonable for every individual, family, neighborhood, and business to take responsibility for their flood safety by understanding the site-specific risk of flooding. Water Resources staff outreaches in many ways hoping the public will seek flood risk reduction advice.

Sources of potential flooding may include:

- Plugged storm drain inlet/pipe
- High intensity storm exceeding the capacity of the piped system
- Power outage or mechanical problem at pump station
- Overwhelmed pump station
- Record storm event

- Flood-prone areas outside of FEMA mapping area
- Sags and areas of ponding
- Roadside ditch
- Channels
- Streams
- Creeks
- Improper site grading
- Canals
- Sloughs
- Floodwall breach
- Levee failure
- Dam failure

On the County website www.saccounty.net ([search stormready](#)), there is helpful information for property owners and tenants to prepare themselves and their loved ones for winter storms. This website includes real time rain gage and stream gage data, and links to forecast sites.

The Local Hazard Mitigation Plan is not an emergency action plan; instead, it looks to mitigate risk before the hazard occurs. If there is an action that can be implemented to reduce the risk of damage due to a natural hazard, it was considered by the planning committee in the preparation of the Plan. Below is an overview of the progress on the mitigation measures promoted in Chapter 5 of the Plan.

www.StormReady.org search: Local Hazard Mitigation Plan then click Chapter 5

GOALS

The planning committee prepared a mission statement for the mitigation planning effort.

Mission Statement: This Local Hazard Mitigation Plan assesses natural hazards of concern to the Sacramento community; evaluates risk to life safety, public health, property, and the environment; and evaluates mitigation measures to reduce these risks and vulnerabilities, minimize losses, and increase community resilience.

Then the planning committee determined the following four main goals in steering the hazard mitigation planning effort:

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.

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

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

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

PROGRESS ON THE MITIGATION ACTION RECOMMENDATIONS

Chapter 5 of the Local Hazard Mitigation Plan describes numerous mitigation actions recommended by the Planning Committee. Table 1 titled 2018 Status of Hazard Mitigation Actions outlines the progress on the proposed actions in unincorporated Sacramento County.

EXHIBIT A FEMA CONFIRMATION

Insert



FEMA

February 20, 2018

George Booth
Senior Engineer
Sacramento County Department of Water Resources
827 7th Street, Room 301
Sacramento, CA 95814

Dear Mr. Booth:

We have received documentation from Reclamation Districts 3, 551, 554, 556, 1002, and the Brannan Andrus Levee Maintenance District, confirming their adoption of the *Sacramento County Local Hazard Mitigation Plan*. These jurisdictions are now in compliance with the planning requirements of the Disaster Mitigation Act of 2000.

The *Sacramento County Local Hazard Mitigation Plan* is valid for five years from the approval date, June 12, 2017, for all approved participants. The plan must be reviewed, updated and submitted to FEMA Region IX for approval at least once every five years. An updated list of the current status of participating jurisdictions is enclosed with this letter.

The approval of this plan ensures Reclamation Districts 3, 551, 554, 556, 1002, and the Brannan Andrus Levee Maintenance District's continued eligibility for project grants under FEMA's Hazard Mitigation Assistance programs, including the Hazard Mitigation Grant Program, Pre-Disaster Mitigation Program, and Flood Mitigation Assistance Program. All requests for funding, however, will be evaluated individually according to the specific eligibility, and other requirements of the particular program under which applications are submitted.

If you have any questions regarding the planning or review processes, please contact Alison Kearns, Senior Community Planner, at (510) 627-7125 or by email at alison.kearns@fema.dhs.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jeffrey D. Lusk".

Jeffrey D. Lusk
Division Director
Mitigation Division
FEMA Region IX

cc: Julie Norris, Mitigation and Dam Safety Branch Chief, California Governor's Office of
Emergency Services
Jennifer Hogan, State Hazard Mitigation Officer, California Governor's Office of Emergency
Services

Status of Participating Jurisdictions as of February 20, 2018

Jurisdictions – Adopted and Approved

#	Jurisdiction	Date of Adoption
1	Sacramento County	7/11/2017
2	Citrus Heights, City of	10/12/2017
3	Elk Grove, City of	8/23/2017
4	Folsom, City of	8/22/2017
5	Galt, City of	8/15/2017
6	Isleton, City of	7/26/2017
7	Rancho Cordova, City of	10/16/2017
8	Sacramento, City of	5/9/2017
9	Brannan Andrus Levee Maintenance District (RD's 317, 407, 2067)	12/14/2017
10	Cosumnes Community Services District Fire Department	9/6/2017
11	Los Rios Community College District	8/9/2017
12	Reclamation District 3	12/21/2017
13	Reclamation District 341	11/14/2017
14	Reclamation District 551	7/18/2017
15	Reclamation District 554	12/19/2017
16	Reclamation District 556	12/19/2017
17	Reclamation District 1000	7/14/2017
18	Reclamation District 1002	12/12/2017
19	Reclamation District 1601	7/18/2017
20	Sacramento Area Sewer District	9/13/2017
21	Sacramento County Water Agency	7/11/2017
22	Sacramento Metro Fire District	9/28/2017
23	Sacramento Regional County Sanitation District	9/13/2017
24	Southgate Recreation and Park District	9/19/2017
25	Twin Rivers School District	8/8/2017

Jurisdictions – Approvable Pending Adoption

#	Jurisdiction
1	Reclamation District 369
2	Reclamation District 563
3	Reclamation District 800
4	Reclamation District 2111

TABLE 1 STATUS OF HAZARD MITIGATION ACTIONS 2018

Insert

TABLE 1

2018 Status of Hazard Mitigation Actions

Action Title No.	Status	Agency/Dept	Description of Action(s)	Contact
Multi-Hazard Actions:				
1	finished	Sacramento County Planning Department	Included by reference in the Safety Element	John Lundgren
2	on-going	Sacramento County staff, various Departments	Continuous effort	Dawn Pimentel
3	on-going	Regional Parks, Dept Transportation, Planning, others	47th Ave project 2020; Auburn Blvd Bike Ped Improvements 2019	Judy Robinson [Tim Stevens, Anthony Voo]
4	on-going	Water Resources	Continuous effort	Dawn Pimentel
5	on-going	Water Resources	Continuous effort	Shayan Rehman
6	on-going	Water Resources	Continuous effort	Shayan Rehman
7	on-going	Water Resources	Continuous effort	Dana Booth
Climate Change Actions:				
8	on-going	Dept General Services and others	The County has added Fuel Cell vehicles to its fleet	Judy Robinson [Keith Leech]
9	on-going	Office of Sustainability, [Building Inspection Dept] and others	Incentives, State Building Code requirements, continued leadership in the Sac PEV Collaborative	Judy Robinson
10	on-going	Office of Sustainability and others	Utilize resources and expertise from Cap Region Climate Readiness Collaborative and other research/best practices- Continuous effort	Judy Robinson

2018 Status of Hazard Mitigation Actions

Action Title No.	Status	Agency/Dept	Description of Action(s)	Contact
11	on-going	Office of Sustainability and others	Utilize resources and expertise from Cap Region Climate Readiness Collaborative, SMAQMD, SMUD, Sac Tree Foundation and other research/best practices	Judy Robinson
Drought Actions:				
12	on-going	Water Resources	Progress is being made	Dave Bolen
Flood, Levee Failure, and Local Flood Actions:				
13	on-going	Water Resources	Continuous effort	Dawn Pimentel
14		Water Resources	The Glenborough project is conditioned to construct flood control improvements to mitigate impact. DWR met with Folsom Ford and found them to be unconcerned about the new FEMA map affecting their auxiliary lot.	Liz Carrington
15	on-going	Water Resources	The developer must secure the 100-yr old dam before beginning phase 2 development of Glenborough	Liz Carrington
16	on-going	City of Folsom, developer	The County did a water quality study. The City needs to consider their long term plan for the property.	George Booth
17	begin Feb 2018	Water Resources	This study will consider the fragility of the existing levee flood control systems and resulting risk, then look at ways to reduce the flood risk.	George Booth
18	on-going	Water Resources	The developer is conditioned to construct flood control features.	Liz Carrington
19	on-going	Water Resources	Progress is being made	Dave Bolen
20	on-going	Water Resources	Discussions with the mining company are underway	George Booth
21	on-going	Water Resources with City of Rancho Cordova	Upstream development plans	George Booth
22	on-going	Water Resources with Maintenance Area 9 and FEMA	The initial discussion with FEMA took place in 2015, feasibility will be considered with the flood risk reduction plan for Hood (see #17)	George Booth

2018 Status of Hazard Mitigation Actions

Action Title No.	Status	Agency/Dept	Description of Action(s)	Contact
23	on-going	Water Resources	Morrison Creek Miners' Reach Flood Insurance Study It has been determined after many discussions with the miners' consultant and with FEMA that a detailed floodplain analysis is more complicated than was foreseen. Now the analysis is proposed to be wrapped into the planning for West Jackson plan	George Booth
24	on-going	Water Resources	Morrison Creek Miners Reach levee improvements Certainly the levees must be improved if the County is to consider the West Jackson development plan. There may be improvements needed even if the mine reclamation plan stands.	George Booth
25	on-going	Water Resources	Outreach storm watch guide (ALERT, Stormready, weather radio) Continuous effort	Matt Robinson
26	on-going	Water Resources with the City of Sacramento	Peak flow floodplain mitigation Arcade Creek near Auburn Blvd On-going topic	George Booth
27	not started	Water Resources	Risk Map (flood frequency, depth, velocity) Risk Map for flood hazards provides the property owner with valuable information including frequency, depth and velocity. FEMA is promoting this concept and if funded it may be considered for watersheds in the County.	George Booth
28	proceeding	Water Resources	Elevation & Acquisition Projects (to Mitigate Flood Risk) There are 40 homes scheduled to be lifted and more projects in the next grant.	George Booth
29	proceeding	Water Resources	Repetitive Loss Properties (to Mitigate Flood Risk) Some repetitive loss property owners are considering mitigation measures utilizing grant funding from FEMA	George Booth
30	on-going	Water Resources	Five-Year Capital Improvement Plan – Drainage Projects Progress is being made	Dave Bolen
31	on-going	Water Resources with cities of Citrus Heights and Sacramento	Arcade Creek Corridor Plan The ped. bridge project crossing Arcade Creek, is an example of cooperation under this program.	George Booth
32	done	Homeowner, FEMA Grant, Water Resources	Elevate Homes on Long Island (Grand Island Road, Sacramento River) One house is being lifted currently, by an FMA FEMA grant. There may be two more that should be lifted.	George Booth
33	no action	Property owner, FEMA Grant, Water Resources	Repetitive Loss Church Building on Dry Creek Outreach efforts December 2017	George Booth

2018 Status of Hazard Mitigation Actions

Action Title No.	Status	Agency/Dept	Description of Action(s)	Contact
34	stop	n/a	Improving conveyance under Kenneth Avenue will not have enough benefit	Shayan Rehman
35	no action	County Parks	no current momentum on this large scale program	Jeff Leatherman / Mikki McDaniels
36	on-going	Developer with Water Resources	If the parcel on the south side of Arcade Creek east of Auburn Blvd. develops, some flood control improvements are necessary. Meanwhile, Evergreen has a flood fighting strategy and homeowners should consider elevating	George Booth
37	no action at this time	Water Resources with Placer County	Consider flood control on Linda Creek, in 1986 and 1995, this creek flooded causing numerous homes to be damaged.	George Booth
38	on-going	County Parks with Water Resources	Some measures, such as flood warning, have been implemented.	
39	on-going	Water Resources with County OES	Much upgrade work is completed, Emergency Services is seeking a grant, with Water Resources to allow for installation of additional gages.	George Booth
40	up coming	Water Resources	Begin 2018	George Booth
41	up coming	Water Resources with Woodside HOA	seeking grant, notice of intent submitted Jan 2018	George Booth
42	scheduled	Transportation	scheduled for 2019	Keith Gotwalt
43	scheduled	Transportation	scheduled for 2020	Tim Stevens
44		Transportation		Steve White
45	up coming	Property owner, Water Resources	awaiting response from the owners	George Booth

2018 Status of Hazard Mitigation Actions

Action Title No.	Status	Agency/Dept	Description of Action(s)	Contact	
46	Hydromodification and Stormwater Quality Countywide	on-going	Water Resources	implementation phase	Dana Booth
47	Evacuation Mapping	finished	Levee RDs, County OES, City of Sacramento, Water Res.	Each levee maintaining agency created evacuation plans including mapping.	George Booth
48	Regional Flood Management Plan Projects	up coming	Levee RDs, SAFCA, Water Resources	Delta small communities flood risk reduction plan and the urban areas 200-yr levee improvements	George Booth
49	Erosion Site Repairs	on-going	Water Resources	Creek erosion repairs are managed on a case by case basis	Rod Goss

updated 4/2/2018 Water Resources

All other actions described in Chapter 5 are jurisdictions with their own governance (Board or Council)