

Chapter 1 Introduction

1.1 Purpose

Sacramento County and 27 other jurisdictions prepared this Local Hazard Mitigation Plan (LHMP) update to the 2011 Federal Emergency Management Agency (FEMA) approved Sacramento County Local Hazard Mitigation Plan. The purpose of this Plan Update is to guide hazard mitigation planning to better protect the people and property of the County from the effects of hazard events. This plan demonstrates the community's commitment to reducing risks from hazards and serves as a tool to help decision makers direct mitigation activities and resources. This plan was also developed, among other things, to ensure Sacramento County and participating jurisdictions' continued eligibility for certain federal disaster assistance: specifically, the FEMA Hazard Mitigation Grant Program (HMGP), Pre-Disaster Mitigation Program (PDM), and the Flood Mitigation Assistance Program (FMA). Completion also earns credits for the National Flood Insurance Program's Community Rating System (CRS) which provides for lower flood insurance premiums in CRS communities.

1.2 Background and Scope

Each year in the United States, natural disasters take the lives of hundreds of people and injure thousands more. Nationwide, taxpayers pay billions of dollars annually to help communities, organizations, businesses, and individuals recover from disasters. These monies only partially reflect the true cost of disasters, because additional expenses incurred by insurance companies and nongovernmental organizations are not reimbursed by tax dollars. Many natural disasters are predictable, and much of the damage caused by these events can be reduced or even eliminated.

Hazard mitigation is defined by FEMA as "any sustained action taken to reduce or eliminate long-term risk to human life and property from a hazard event." The results of a three-year, congressionally mandated independent study to assess future savings from mitigation activities provides evidence that mitigation activities are highly cost-effective. On average, each dollar spent on mitigation saves society an average of \$4 in avoided future losses in addition to saving lives and preventing injuries (National Institute of Building Science Multi-Hazard Mitigation Council 2005).

Hazard mitigation planning is the process through which hazards are identified, likely impacts determined, mitigation goals set, and appropriate mitigation strategies determined, prioritized, and implemented. This plan documents Sacramento County's hazard mitigation planning process and identifies relevant hazards and vulnerabilities and strategies the County and participating jurisdictions will use to decrease vulnerability and increase resiliency and sustainability in the community.

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 are seeking approval of the LHMP Plan Update:

- Sacramento County*
- Brannan Andrus Levee Maintenance District (Reclamation Districts 317, 407, 2067)
- City of Citrus Heights*
- City of Elk Grove*
- City of Folsom*
- City of Galt*
- City of Isleton
- City of Rancho Cordova*
- City of Sacramento*
- Cosumnes Community Services District Fire Department*
- Los Rios Community College*
- Reclamation District 3
- Reclamation District 341*
- Reclamation District 369
- Reclamation District 551
- Reclamation District 554
- Reclamation District 556
- Reclamation District 563
- Reclamation District 800*
- Reclamation District 1000*
- Reclamation District 1002
- Reclamation District 1601
- Reclamation District 2111
- Sacramento Area Sewer District
- Sacramento Metro Fire District
- Sacramento Regional County Sanitation District*
- Southgate Recreation and Park District*
- Twin Rivers School District*

* Participated in 2010 Plan

3 jurisdictions that were approved for the 2011 LHMP, but are not seeking approval for this Plan Update include:

- Arcade Creek Recreation and Park District
- Fair Oaks Recreation and Park District
- SAFCA

This Plan Update was prepared pursuant to the requirements of the Disaster Mitigation Act of 2000 (Public Law 106-390) and the implementing regulations set forth by the Interim Final Rule published in the Federal Register on February 26, 2002, (44 CFR §201.6) and finalized on October 31, 2007. (Hereafter, these requirements and regulations will be referred to collectively as the Disaster Mitigation Act (DMA) or DMA 2000.) While the act emphasized the need for mitigation plans and more coordinated mitigation planning and implementation efforts, the regulations established the requirements that local hazard mitigation plans must meet in order for a local jurisdiction to be eligible for certain federal disaster assistance and hazard mitigation funding under the Robert T. Stafford Disaster Relief and Emergency Act (Public Law 93-288). This planning effort also follows FEMA's 2013 Plan Preparation Guidance. Because the Sacramento County Planning Area is subject to many kinds of hazards, access to these programs is vital.

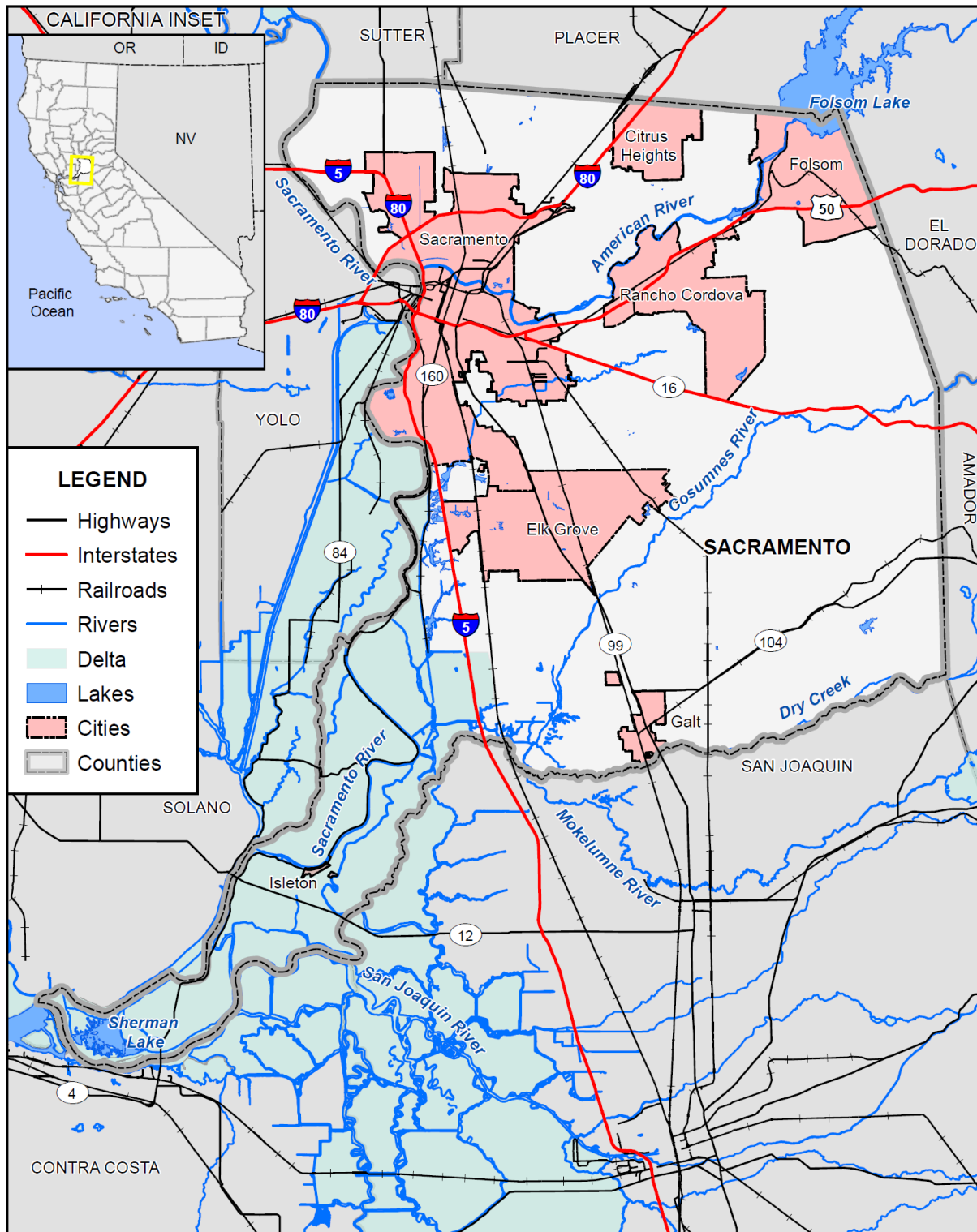
Information in this plan will be used to help guide and coordinate mitigation activities and decisions for local land use policy in the future. Proactive mitigation planning will help reduce the cost of disaster response and recovery to communities and their residents by protecting critical community facilities, reducing liability exposure, and minimizing overall community impacts and disruptions. The Planning Area has been affected by hazards in the past and is thus committed to reducing future impacts from hazard events and maintaining eligibility for mitigation-related federal funding.

1.3 Community Profile

Sacramento County lies within the Central Valley of California, and is the County seat of the state capitol of Sacramento. The County has a history as a center of government, trade, transportation and agriculture, and as a consequence the City of Sacramento is a major transportation hub. Interstates 80 and 5; U.S. Highway 50; and State Highways 99, 16 and 160 all extend from the outer edges of the County and converge in downtown Sacramento. Similarly, all of the rail lines in the County converge in Sacramento at the site of the old Sacramento Rail Yard. Airports include Sacramento International, Sacramento Executive, Mather Air Force Base, McClellan Air Force Base and other smaller airports. Each of these major transportation corridors or locations impacts the land uses in the vicinity.

The County is divided into 25 community areas, seven of which are incorporated cities. Most of these communities are in the urbanized core in the western, northwestern or northern portion of the County. The southwestern, eastern and southern portions of the County are more agricultural and rural residential. Many portions of the developed County are within the historic floodplains of the three major rivers (Sacramento, American, and Cosumnes Rivers) and are protected by a system of levees. A map of the County is shown in Figure 1.1.

Figure 1-1 Sacramento County



Data Source: Sacramento County GIS, Cal-Atlas; Map Date: 05/2016.



1.3.1. History

Early Spanish explorers and the Franciscan and Jesuit missionaries who followed them were the first Europeans to reach northern California. The interior of the Sacramento Valley, away from the easily defended and more accessible chain of coastal missions and pueblos, was left largely untouched by the Spanish and “Californios.” Established settlement of the Sacramento area did not begin until the late 1830s and early 1840s, when resourceful and independent individuals such as Sutter and Jared Sheldon obtained land grants from the Mexican government, usually in exchange for an agreement to protect Mexican interest in these remote interior regions.

With the initial Euro-American settlement of Sacramento County by John Sutter in 1839 at what would become Sutter’s Fort, the established outpost brought with it an increase in Euro-American trappers, hunters and settlers to the area. After the arrival of Sutter, several individuals obtained large Mexican Land Grants in the area. As a result of the Mexican War (1847-1848), California became part of the territory of the United States. In 1848, gold was discovered at Sutter’s Mill in Coloma. With the discovery of gold in 1848, a torrent of settlers from the east flooded into the Sacramento region. As the population increased and easily found gold decreased, newcomers who decided to stay turned to alternative vocations, particularly agriculture. Many found land comparatively plentiful and cheap. Raising grain, livestock, and produce to sell to the thousands of miners heading to the gold fields proved a profitable venture. These combined events hastened the settlement of the area and the development of Sacramento as an economic and transportation center. The designation of Sacramento as the state capital, in 1854, also resulted in the area’s increase in socio-political importance.

The County is the major component of the Sacramento Metropolitan Statistical Area (SMSA) which includes Sacramento, El Dorado and Placer Counties. The County Charter was established in 1933 and is still used today. The official County Seal was adopted by the Board of Supervisors on January 18, 1961, following a contest for an appropriate design.

1.3.2. Geography and Climate

Sacramento County lies just north of the center of California’s Central Valley. The confluence of two of the state’s major rivers, the Sacramento and the American, occurs within the County. The southwestern panhandle of the county extends far into the Sacramento-San Joaquin Delta, to the point just north of Antioch, where nearly all waters of the Central Valley converge. To the south, San Joaquin County is primarily agricultural. The wooded foothills of the Sierra Nevada rise to the east in Amador and El Dorado Counties. On the north, Placer County has experienced dramatic growth over the past decade, and much of the grasslands adjacent to the northern Sacramento County boundary have been converted to residential uses. Yolo and Sutter Counties to the northwest and west have experienced growth as well, though agricultural uses remain.

The County is divided into 25 community areas, seven of which are incorporated cities. Most of these communities are in the urbanized core in the western, northwestern or northern portion of the County. The southwestern, eastern and southern portions of the County are more agricultural and rural residential. Many portions of the developed County are within the historic floodplains of the three major rivers (Sacramento,

American, and Cosumnes Rivers) and are protected by a system of levees. The California Department of Finance estimated the total population of the County to be 1,470,912 in 2015.

In general, topography in Sacramento County is characterized by a broad band of very flat valley floor land in the western sector, a transition zone of gently sloping alluvial plains in the central sector, and a low foothill region in the eastern sector. Elevations range from below sea level in the delta island area in the Southwest corner of the County to approximately 800 feet in the foothill region. Much of Sacramento County is low and flat. Some areas of the county are so flat that they have essentially no slope at all. Natural drainageways in these areas are usually poorly defined, and drainage of storm waters is slow. Most of these areas lie in the western and southern portions of the County. The general drainage pattern in Sacramento County is from northeast to southwest. As previously noted, all drainage is ultimately conveyed out of the county by the Sacramento and San Joaquin Rivers.

Sacramento County is characterized by a mild climate, with year-round sunshine. The summers are warm, with dry days and mild nights. During the winter “rainy season” (November through February), over half the total annual precipitation falls, yet rain in measurable amounts occurs only about ten days monthly during the winter. Mountains surround the Sacramento Valley to the west, north and east. Because of the shielding influence of the high mountains, winter storms reach the valley in a modified form. However, torrential rain and heavy snow frequently fall on the Western Sierra Slopes, the Southern Cascades, and to a lesser extent, the Coastal Range. As a result, flood conditions occasionally occur along the Sacramento River and its tributaries.

1.3.3. Population and Demographics

The California Department of Finance 2015 estimates for population of the County and its jurisdictions are shown in Table 1-1.

Table 1-1 Sacramento County Population by Jurisdiction

Jurisdiction	Total Population
Citrus Heights	85,147
Elk Grove	162,899
Folsom	74,909
Galt	24,607
Isleton	820
Rancho Cordova	69,112
Sacramento	480,105
Unincorporated County	573,313
Total	1,470,912

Source: California Department of Finance, 2015 E-1 Report

Select social and economic information for the County and participating jurisdictions are shown in Table 1-2.

Table 1-2 Sacramento County – Select Social and Economic Statistics

Statistic	Number
Populations	
Population under 5	7.1%
Population over 65	11.2%
Median Age	34.8
Racial Makeup	
White	57.5
Black or African American	10.4
American Indian or Alaska Native	1.0
Asian	14.3
Native Hawaiian or Pacific Islander	1.0
Two or more races	6.6
Income and Poverty	
Median income	\$55,615
Mean Income	\$73,456
Poverty rate	
All families	13.7%
All people	18.1%
Unemployment Rate (September 2016)	5.2%

Source: 2010 US Census, Bureau of Labor Statistics

1.4 Economy and Tax Base

Sacramento County has a diverse economy. US Census estimate show economic characteristics for the County. These are shown in Table 1-3.

Table 1-3 Sacramento County Civilian Employed Population 16 years and Over

Industry	Estimated Employment	Percent
Agriculture, forestry, fishing and hunting, and mining	4,858	0.8%
Construction	39,046	6.3%
Manufacturing	34,750	5.6%
Wholesale trade	15,725	2.5%
Retail trade	70,392	11.4%
Transportation and warehousing, and utilities	28,369	4.6%
Information	13,453	2.2%
Finance and insurance, and real estate and rental and leasing	45,950	7.4%

Industry	Estimated Employment	Percent
Professional, scientific, and management, and administrative and waste management services	71,867	11.6%
Educational services, and health care and social assistance	136,652	22.1%
Arts, entertainment, and recreation, and accommodation and food services	56,996	9.2%
Other services, except public administration	32,546	5.3%
Public administration	68,442	11.1%

Source: US Census Bureau American Community Survey 2010-2014 Estimates

Fortunately for Sacramento County, many large industries are located in Sacramento County. Major employers in the County are shown in Table 1-4. In addition, the County is home to the Port of Sacramento, which allows for agricultural commodities to be shipped worldwide.

Table 1-4 Major Employers in Sacramento County

Employer Name	Location	Industry
Aerojet-Rocketdyne Holdings	Rancho Cordova	Aerospace Industries (Mfrs.)
Air Resources Board	Sacramento	State Government-Environmental Programs
AMPAC Fine Chemicals LLC	Rancho Cordova	Chemicals-Manufacturers
California Prison Industry Authority	Folsom	State Govt.-Correctional Institutions
California State University	Sacramento	Schools-Universities & Colleges Academic
Corrections Dept.	Sacramento	State Govt.-Correctional Institutions
Delta Dental	Rancho Cordova	Insurance
Disabled American Veterans	Sacramento	Veterans' & Military Organizations
Employment Development Dept.	Sacramento	Government-Job Training/Voc. Rehab Services
Environmental Protection Agency	Sacramento	State Government-Environmental Programs
Exposition & Fair	Sacramento	Government Offices - State
Intel Corp	Folsom	Computer & Equipment Dealers
Mercy General Hospital	Sacramento	Hospitals
Mercy San Juan Medical Ctr.	Carmichael	Hospitals
Municipal Services Agency	Sacramento	Grading Contractors
Sacramento Bee	Sacramento	Newspapers (Publishers/Mfrs.)
Sacramento Regional Transit	Sacramento	Bus Lines
Sacramento State	Sacramento	Schools-Universities & Colleges Academic
SMUD Customer Service Center	Sacramento	Electric Companies
Sutter Memorial Hospital	Sacramento	Hospitals

Employer Name	Location	Industry
UC Davis Medical Center	Sacramento	Hospitals
Water Resource Dept	Sacramento	State Government-Environmental Programs

Source: America's Labor Market Information System (ALMIS) Employer Database, 2016 1st Edition.

The County has a wide and varied tax base. Tax base information is tracked and maintained by the Sacramento County Assessor's Office. The following tables show the tax base for the County as well as for the incorporated jurisdictions. Table 1-5 shows the secured real property value by property type for the entire County. Table 1-6 shows the secured real property value by jurisdiction. Table 1-7 breaks out the jurisdictions by land use.

Table 1-5 2016-2017 Sacramento County Planning Area Distribution of Value by Property Use

Property Use	Assessments	2015-16 Value (\$)	2016-2017 Value (\$)	Ratio of Total Value to Prior Value
Single Family Residential	380,907	85,511,262,266	90,146,646,411	1.054
Mobile Homes	7,856	372,879,553	380,928,297	1.028
Multi-Family Residential	21,209	12,544,846,078	12,938,650,086	1.037
Vacant Residential Land	15,035	1,348,538,827	1,555,324,881	1.301
Commercial	13,026	22,075,156,589	24,043,815,805	1.092
Vacant Commercial Land	2,062	612,388,949	677,822,995	1.183
Industrial	4,619	5,283,794,161	5,549,247,547	1.066
Vacant Industrial Land	1,415	364,217,201	318,917,406	0.993
Vacant and Improved Rural	5,680	1,867,233,067	1,956,212,388	1.053
Unrestricted Rural	1,209	712,115,252	712,712,592	1.042
Restricted Rural	1,444	583,934,662	610,240,481	1.075
Oil, Gas, Mineral Rights	139	92,623,784	61,557,947	0.665
Other*	21,306	1,174,140,141	1,214,259,905	1.040
Totals**	475,907	132,543,130,530	140,166,336,741	1.062

Source: Sacramento County Assessor's Office

*Churches, miscellaneous vacant land

**Gross totals, before Exemptions, less Secured Fixtures and Personal Property

Table 1-6 Local Assessment Roll Totals by Jurisdiction

Jurisdiction	2015-16 Value (\$)	2016-17 Value (\$)	Current Year Change	Percent of Current Roll*
Citrus Heights	6,172,005,395	6,451,760,362	4%	4
Elk Grove	17,412,867,028	18,541,918,216	6%	13
Folsom	11,973,366,059	12,576,166,745	5%	9
Galt	1,738,795,750	1,855,626,958	6%	1
Isleton	50,114,828	50,790,458	1%	0

Jurisdiction	2015-16 Value (\$)	2016-17 Value (\$)	Current Year Change	Percent of Current Roll*
Rancho Cordova	7,313,825,493	7,793,218,613	6%	5
Sacramento City	44,417,867,548.2	47,118,444,96	6%	32
Unincorporated Area	51,612,441,745	53,664,479,099	4%	36
Total Value (Gross)	140,691,283,846	148,052,405,413	5%	100

Source: Sacramento County Assessor's Office

*Percentages rounded to the nearest whole number

Table 1-7 Summary of Property Uses by Jurisdiction

Jurisdiction	Single Family with HEX*	Single Family Without HEX*	Multi-Family Residential	Vacant Land	Commercial	Agricultural	Mobile Homes	Other	Total
Citrus Heights	12,849	9,741	1,428	472	622	0	1,918	355	27,835
Elk Grove	27,135	20,779	349	2,743	984	28	248	735	53,001
Folsom	13,296	7,792	317	1,744	755	17	854	574	25,349
Galt	3,661	2,884	193	527	204	3	361	128	7,961
Isleton	82	143	19	155	83	1	44	39	566
Rancho Cordova	9,113	8,036	921	1,539	1,324	25	1,350	329	22,637
Sacramento City	61,522	59,451	8,548	8,961	7,217	8	3,230	4,449	153,386
Unincorporated Area	85,078	64,852	7,482	7,966	6,015	2,571	7,801	3,857	185,622
Total Value (Gross)	212,736	173,678	19,257	24,107	17,204	2,653	15,806	10,466	475,907

Source: Sacramento County Assessor's Office

*Homeowners' Exemption

1.5 Plan Organization

This Sacramento County 2016 LHMP Update is a multi-jurisdictional plan that geographically covers the entire area within Sacramento County's jurisdictional boundaries (i.e., the Planning Area). Participating jurisdictions within the Sacramento County Planning Area include: Unincorporated Sacramento County, the seven incorporated communities, and 20 special districts.

- Chapter 2: What's New
- Chapter 3: Planning Process
- Chapter 4: Risk Assessment
- Chapter 5: Mitigation Strategy
- Chapter 6: Plan Adoption
- Chapter 7: Plan Implementation and Maintenance
- Jurisdictional Annexes
- Appendices

The Sacramento County Local Hazard Mitigation Plan update is organized as follows:

The **Base Plan** provides the overall framework for this multi-jurisdictional LHMP. It is the umbrella document that includes the planning process, methodologies, and procedural requirements for all participating jurisdictions (i.e., unincorporated County and all Jurisdictional Annexes). As such, Chapters 1-7 of the Base Plan apply to the unincorporated County, the seven incorporated communities and all 20 special districts as participants to this LHMP update seeking FEMA approval of the plan. Because this is a multi-jurisdictional plan, the Base Plan addresses the LHMP hazard mitigation planning elements for all participating jurisdictions and includes data, information, and analysis specific to: The Sacramento County Planning Area (which includes all participating jurisdictions and the entire geographic boundary of Sacramento County) and Unincorporated Sacramento County.

The **Jurisdictional Annexes (and Delta chapters)** detail the hazard mitigation planning elements specific to each participating jurisdiction to this 2016 Sacramento County LHMP Update. Each Annex is not intended to be a standalone document, but appends to, supplements, and incorporates by reference the information contained in the Base Plan document. As such, all Chapters 1-7 of the Base Plan, including the planning process and other procedural requirements and planning elements apply to and were met by each participating jurisdiction. The Annexes provide additional information specific to each participating jurisdiction, with a focus on providing additional details on the risk assessment and mitigation strategy.

As part of these Jurisdictional Annexes, a **Delta Annex** was created which provides an umbrella base document specific to the Delta Area, which then contains the Annexes (or Chapters) for the participating jurisdictions (City of Isleton and Reclamation Districts) located within the Delta Region.

The **Appendices** provide additional information, data, and planning process documentation that applies to all participating jurisdictions (i.e., Unincorporated County and all Jurisdictional Annexes) to this Sacramento County 2016 LHMP Update.