



Delta Annex Chapter 1 City of Isleton

1.1 Introduction

This chapter of the Delta Annex details the hazard mitigation planning elements specific to the City of Isleton, a new participating jurisdiction to the Sacramento County Local Hazard Mitigation Plan (LHMP) Update. This chapter of the Delta Annex is not intended to be a standalone document, but appends to and supplements the information contained in the Base Plan document. As such, all sections of the Base Plan, including the planning process and other procedural requirements apply to and were met by the City. This chapter of the Delta Annex provides additional information specific to the City of Isleton, with a focus on providing additional details on the planning process, risk assessment, and mitigation strategy for this community.

1.2 Planning Process

As described above, the City of Isleton followed the planning process detailed in Section 3 of the Base Plan. In addition to providing representation on the Sacramento County Hazard Mitigation Planning Committee (HMPC) and Steering Committee, the City formulated their own internal planning team to support the broader planning process requirements. Internal planning participants, their positions, and how they participated in the planning process are shown in Table 1-1. Additional details on plan participation and City representatives are included in Appendix A.

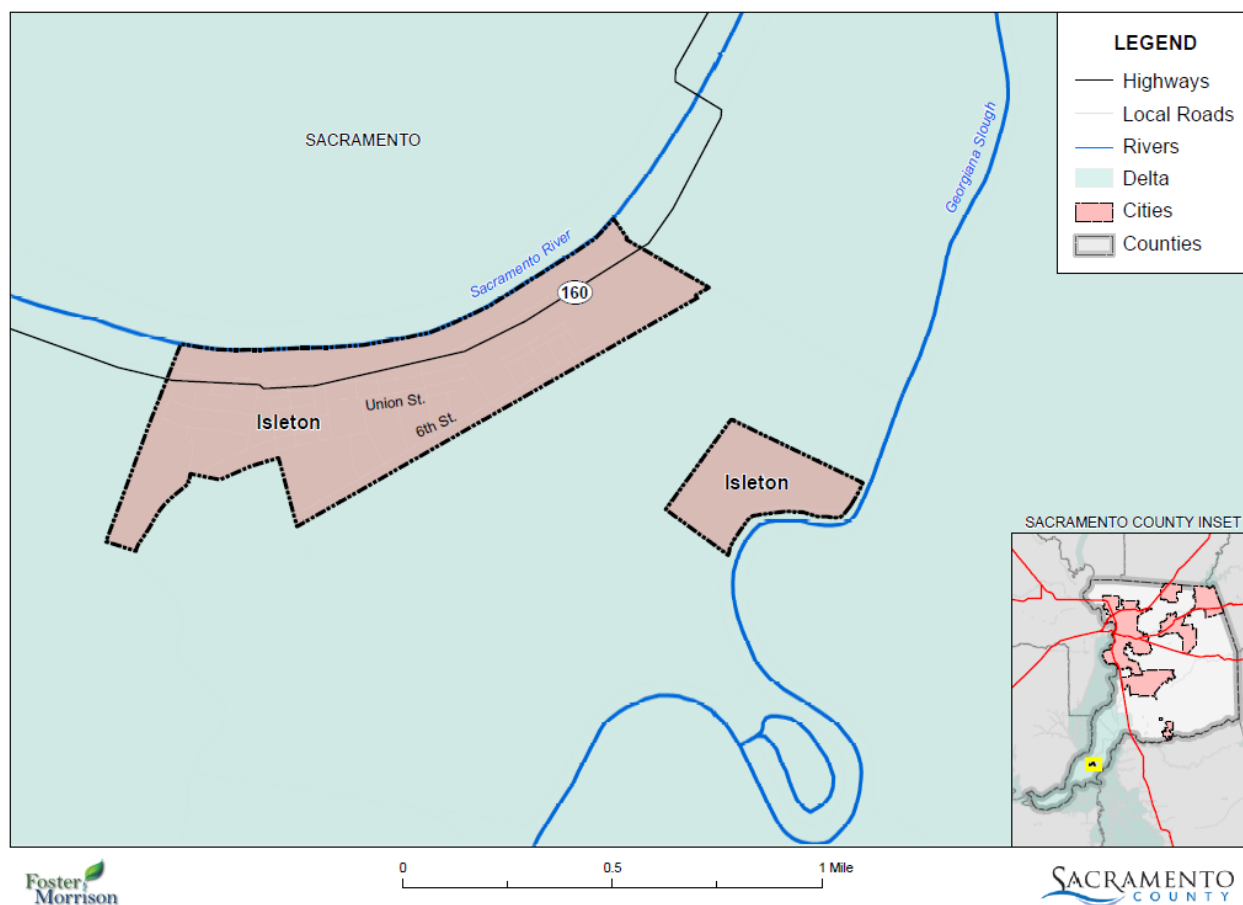
Table 1-1 City of Isleton Planning Team

Name	Position/Title	How Participated
Romi Balbini	Director of Public Works	Attended meetings and provided all the information supplied within this annex
Sandra Rutledge	Assistant City Manager	Coordination of data

1.3 Community Profile

The community profile for the City of Isleton is detailed in the following sections. Figure 1-1 displays a map and the location of the City of Isleton within Sacramento County.

Figure 1-1 City of Isleton



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

1.3.1. Geography and Climate

According to the United States Census Bureau, the city has a total area of 0.5 square miles, of which, 0.4 square miles of it is land and 0.05 square miles of it is water. According to the Köppen Climate Classification system, Isleton has a warm-summer Mediterranean climate.

1.3.2. History

The small town on Isleton is located in southern Sacramento County in the Delta Region along the banks of the Sacramento River. The Delta is a land of rivers, agriculture, boating, fishing, and rich history. Isleton was once referred to as the “Little Paris on the Delta.”

Josiah Pool founded Isleton in 1874. Isleton, like many other communities in Sacramento County, benefited from gold fever. Its location on the river brought commerce and trade since the river was the primary source of transport. Improving the waterways for deeper channels that would permit year round travel brought about levee construction. The levees remain though the town has since dwindled from its boom days

Isleton’s resident population is currently 820. The town hosts several festivals, including the Spam Contest, which originated as a direct result of the floods of 1996. Displaced families during the flood were given shelter at the Hotel Del Rio, owned by Ralph and Charli Hand. When people visited their homes, they remarked that the labels on the Spam cans were the only labels that survived. Charli decided to make some fun of it and the Spam Contest was created. Contestants cook Spam, carve Spam, dress Spam up in costumes and even appoint a “Captain Spam.”

1.3.3. Economy and Tax Base

US Census estimates show economic characteristics for the City of Isleton. These are shown in Table 1-2 and Table 1-3. Mean household income in the City was \$49,704. Median household income in the City was \$30,900. Major employers in the vicinity are shown below the tables.

Table 1-2 City of Isleton Civilian Employed Population 16 years and Over

Industry	Estimated Employment	Percent
Agriculture, forestry, fishing and hunting, and mining	24	8.3%
Construction	60	20.8%
Manufacturing	13	4.5%
Wholesale trade	6	2.1%
Retail trade	18	6.2%
Transportation and warehousing, and utilities	11	3.8%
Information	0	0.0%
Finance and insurance, and real estate and rental and leasing	0	0.0%
Professional, scientific, and management, and administrative and waste management services	51	17.6%
Educational services, and health care and social assistance	44	15.2%
Arts, entertainment, and recreation, and accommodation and food services	49	17.0%
Other services, except public administration	7	2.4%
Public administration	6	2.1%

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

Table 1-3 City of Isleton Income and Benefits

Income Bracket	Population	Percent
>\$10,000	30	9.8%
\$10,000 – \$14,999	45	14.7%
\$15,000 - \$24,999	57	18.6%
\$25,000 – \$34,999	38	12.4%
\$35,000 – \$49,999	32	10.5%
\$50,000 – \$74,999	57	18.6%

Income Bracket	Population	Percent
\$75,000 – \$99,999	22	7.2%
\$100,000 – \$149,999	7	2.3%
\$150,000 – \$199,999	18	5.9%
\$200,000 or more	0	0.0%

Source: US Census Bureau, 2010

The City 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 City. Table 1-4 shows the secured real property value for Isleton. Table 1-5 breaks out the City by land use.

Table 1-4 City of Isleton – Tax Roll Totals by Jurisdiction

Jurisdiction	2015-16 Value (\$)	2016-17 Value (\$)	Current Year Change	Percent of Current Roll*
Isleton	50,114,828	50,790,458	1%	0

Source: Sacramento County Assessor’s Office

*Percentages rounded to the nearest whole number

Table 1-5 City of Isleton – Summary of Property Types

Jurisdiction	Single Family with HEX*	Single Family Without HEX*	Multi-Family Residential	Vacant Land	Commercial	Agricultural	Mobile Homes	Other	Total
Isleton	82	143	19	155	83	1	44	39	566

Source: Sacramento County Assessor’s Office

*Homeowners' Exemption

1.3.4. Population

The California Department of Finance estimated the January 1, 2015 total population for the City of Isleton was 820.

Select demographic information from the 2014 US Census American Community Survey (the most recent data available) is shown in Table 1-6.

Table 1-6 City of Isleton Demographic Information

Demographic Characteristic	Number	Percent
Race		
White	327	41.3%
Black or African American	8	1.0%
American Indian or Alaska Native	3	0.4%
Asian	58	7.3%

Demographic Characteristic	Number	Percent
Hawaiian or Pacific Islander	391	48.6%
Two or more races	5	0.6%
Total Households	331	–
Average Household Size	2.43	–

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

1.4 Hazard Identification

Isleton’s planning team identified the hazards that affect the City and summarized their frequency of occurrence, spatial extent, potential magnitude, and significance specific to Isleton (see Table 1-7).

Table 1-7 City of Isleton—Hazard Identification

Hazard	Geographic Extent	Probability of Future Occurrences	Magnitude/Severity	Significance
Agricultural Hazards				
Bird Strike				
Climate Change	Significant	Likely	Limited	Medium
Dam Failure				
Drought and Water Shortage	Extensive	Likely	Limited	High
Earthquake				
Earthquake: Liquefaction				
Flood: 100/200/500-year	Significant	Occasional	Catastrophic	High
Flood: Localized Stormwater Flooding	Limited	Highly Likely	Limited	Medium
Landslides				
Levee Failure	Extensive	Occasional	Catastrophic	High
River/Stream/Creek Bank Erosion				
Severe Weather: Extreme Temperatures – Cold/Freeze				
Severe Weather: Extreme Temperatures – Heat	Extensive	Highly Likely	Limited	Medium
Severe Weather: Fog	Extensive	Highly Likely	Critical	Medium
Severe Weather: Heavy Rains and Storms (Thunderstorms, Hail, and Lightning)	Significant	Highly Likely	Critical	Medium
Severe Weather: Wind and Tornadoes				
Subsidence	Significant	Highly Likely	Limited	Low
Volcano	Limited	Unlikely	Limited	Low
Wildfire:(Burn Area/Smoke)	Limited	Unlikely	Limited	Low
Geographic Extent Limited: Less than 10% of planning area Significant: 10-50% of planning area Extensive: 50-100% of planning area		Magnitude/Severity Catastrophic —More than 50 percent of property severely damaged; shutdown of facilities for more than 30 days; and/or multiple deaths Critical —25-50 percent of property severely damaged; shutdown of facilities for at least two weeks; and/or injuries and/or illnesses result in permanent disability Limited —10-25 percent of property severely damaged; shutdown of facilities for more than a week; and/or injuries/illnesses treatable do not result in permanent disability Negligible —Less than 10 percent of property severely damaged, shutdown of facilities and services for less than 24 hours; and/or injuries/illnesses treatable with first aid		
Probability of Future Occurrences Highly Likely: Near 100% chance of occurrence in next year, or happens every year. Likely: Between 10 and 100% chance of occurrence in next year, or has a recurrence interval of 10 years or less. Occasional: Between 1 and 10% chance of occurrence in the next year, or has a recurrence interval of 11 to 100 years. Unlikely: Less than 1% chance of occurrence in next 100 years, or has a recurrence interval of greater than every 100 years.		Significance Low: minimal potential impact Medium: moderate potential impact High: widespread potential impact		

1.5 Hazard Profile and Vulnerability Assessment

The intent of this section is to profile Isleton’s hazards and assess the City’s vulnerability separate from that of the Planning Area as a whole, which has already been assessed in Sections 4.2 Hazard Profiles and 4.3 Vulnerability Assessment in the main plan. The hazard profiles in the main plan discuss overall impacts to the Planning Area and describes the hazard problem description, hazard extent, magnitude/severity, previous occurrences of hazard events and the likelihood of future occurrences. Hazard profile information specific to the City of Isleton is included in this Annex. This vulnerability assessment analyzes the property, population, critical facilities, and other assets at risk to hazards ranked of medium or high significance specific to the City of Isleton and also includes a vulnerability assessment to the three primary hazards to the State of California: earthquake, flood, and wildfire. For more information about how hazards affect the County as a whole, see Chapter 4 Risk Assessment in the main plan.

1.5.1. Hazard Profiles

Each hazard vulnerability assessment in Section 1.5.3, includes a description as to how the hazard affects the City and information on past occurrences. The intent of these section is to provide jurisdictional specific information on hazards and further describe how the hazards and risks differ across the Planning Area.

1.5.2. Vulnerability Assessment and Assets at Risk

This section presents the vulnerability assessment for the City and identifies Isleton’s total assets at risk, including values at risk, critical facilities and infrastructure, natural resources, and historic and cultural resources. Growth and development trends are also presented for the community. This data is not hazard specific, but is representative of total assets at risk within the community.

Assets at Risk

The following data from the Sacramento County Assessor’s Office is based on the 2015 Assessor’s data. The methodology used to derive property values is the same as in Section 4.3.1 of the Base Plan. This data should only be used as a guideline to overall values in the County, as the information has some limitations. The most significant limitation is created by Proposition 13. Instead of adjusting property values annually, the values are not adjusted or assessed at fair market value until a property transfer occurs. As a result, overall value information is most likely low and does not reflect current market value of properties within the County. It is also important to note, in the event of a disaster, it is generally the value of the infrastructure or improvements to the land that is of concern or at risk. Generally, the land itself is not a loss. Table 1-8 shows the 2015 Assessor’s values (e.g., the values at risk) broken down by property type for the City of Isleton.

Table 1-8 City of Isleton – Total Assets at Risk by Property Use

Property Use	Total Parcel Count	Improved Parcel Count	Total Land Value	Improved Structure Value	Total Value
Agricultural	1	0	\$10,642	\$0	\$10,642
Care / Health	0	0	\$0	\$0	\$0

Property Use	Total Parcel Count	Improved Parcel Count	Total Land Value	Improved Structure Value	Total Value
Church / Welfare	8	8	\$126,424	\$725,325	\$851,749
Industrial	8	7	\$648,069	\$872,264	\$1,520,333
Miscellaneous	14	0	\$8,417	\$0	\$8,417
Office	5	4	\$375,240	\$592,391	\$967,631
Public / Utilities	35	1	\$832,422	\$30,000	\$862,422
Recreational	0	0	\$0	\$0	\$0
Residential	251	247	\$8,765,278	\$20,390,509	\$29,155,787
Retail / Commercial	63	61	\$2,093,003	\$5,909,252	\$8,002,255
Vacant	140	6	\$4,013,846	\$32,963	\$4,046,809
No Data	0	0	\$0	\$0	\$0
Total	525	334	\$16,873,341	\$28,552,704	\$45,426,045

Source: Sacramento County 2016 Parcel/2015 Assessor's Data

Critical Facilities and Infrastructure

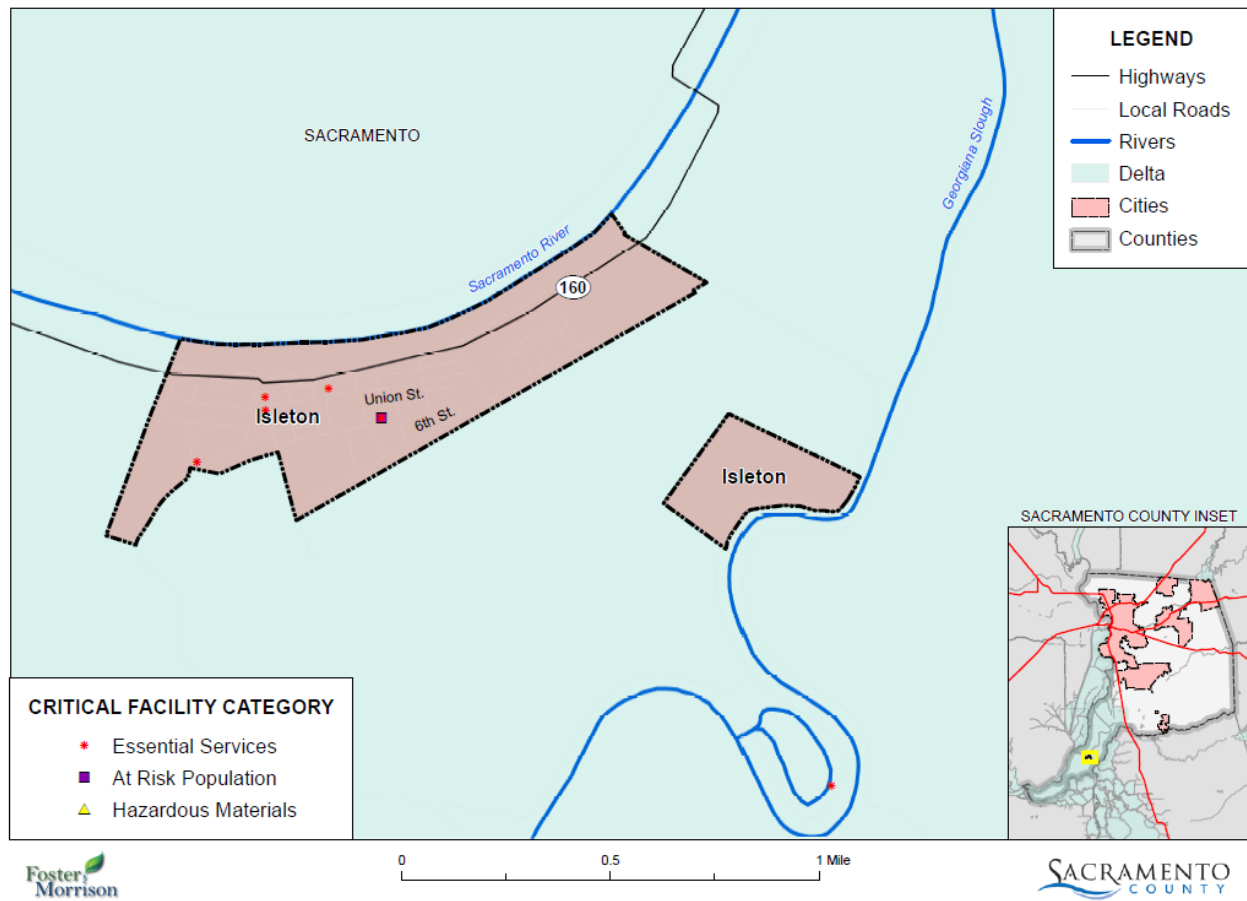
For purposes of this plan, a critical facility is defined as:

Any facility, including without limitation, a structure, infrastructure, property, equipment or service, that if adversely affected during a hazard event may result in severe consequences to public health and safety or interrupt essential services and operations for the community at any time before, during and after the hazard event.

This definition was refined by separating out three classes of critical facilities, that include Essential Services Facilities, At Risk Population Facilities, and Hazardous Materials Facilities, as further described in Section 4.3.1 of the Base Plan.

An inventory of critical facilities in the City of Isleton from Sacramento County GIS is shown on Figure 1-2 and detailed in Table 1-9. Details of critical facility definition, type, name, address, and jurisdiction by hazard zone are listed in Appendix E.

Figure 1-2 City of Isleton – Critical Facilities



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

Table 1-9 City of Isleton – Critical Facilities Inventory

Critical Facility Category	Facility Type	Facility Count
Essential Services Facilities	At Risk Populations	0
	Communications	0
	Emergency Response	2
	Gathering Areas	0
	Government Operations	2
	Hazardous Material	0
	Health and Care	0
	Public Safety	1
	Transportation	0
	Utilities	0
	Total	5
At Risk Population Facilities	At Risk Populations	0

Critical Facility Category	Facility Type	Facility Count
	Communications	0
	Emergency Response	0
	Gathering Areas	1
	Government Operations	0
	Hazardous Material	0
	Health and Care	0
	Public Safety	0
	Transportation	0
	Utilities	0
	Total	1
Hazardous Materials Facilities	At Risk Populations	0
	Communications	0
	Emergency Response	0
	Gathering Areas	0
	Government Operations	0
	Hazardous Material	0
	Health and Care	0
	Public Safety	0
	Transportation	0
	Utilities	0
	Total	0
Grand Total		6

Source: Sacramento County GIS

Natural Resources

There are ample natural resources in and around the City of Isleton.

Vegetation occurring throughout the urban areas includes nonnative annual grasses such as Italian ryegrass, Ripgut brome, and Bermuda grass. Nonnative herbaceous species such as Yellow star-thistle, Wild radish, Field mustard, Peppergrass, and Pampas grass are also present. Stands of Northern California black walnut are located along Hwy. 160, on the east side of the Sacramento River.

A number of irrigation canals occur within the agricultural lands and are vegetated with species adapted to wet habitats (e.g. Cattail, Bulrush, Cocksfoot, and Waterpepper).

Riparian woodland vegetation occurs along the Sacramento River. The riparian corridors are dominated by Valley and Coast live oaks, Narrow-leaved willow, Fremont cottonwood, California buckeye, and Himalayan blackberry. Jackson Slough serves as an agricultural drainage canal within the Plan area. Vegetation along the slough includes Narrow-leaved willow, Valley and Coast live oak, Himalayan

blackberry, Giant reed, and emergent vegetation such as cattails. Several clumps of Blue elderberry shrubs were observed on the banks of the slough on the east side of Jackson Slough Road.

Wildlife habitats in the Plan area provide foraging and/or breeding habitat for wildlife species including amphibians, reptiles, birds, and mammals. Amphibian species that could occur in the City include bullfrog, Pacific treefrog, and Western toad. Reptile species that may occur in the study area include Western terrestrial garter snake (*Thamnophis elegans*), Western fence lizard (*Sceloporus occidentalis*), and Western pond turtle (*Clemmys marmorata marmorata*). Habitat for Giant garter snakes (*Thamnophis gigas*) occurs in Jackson Slough.

The riparian habitats along the Sacramento River and Jackson Slough provide nesting and foraging habitat for numerous bird species. The agricultural lands provide foraging habitat for bird species such as Brewer's blackbird (*Euphagus cyanocephalus*), brown-headed cowbird (*Molothrus ater*), killdeer (*Charadrius vociferus*), and Western meadowlark (*Sturnella neglecta*). Raptors (birds of prey) known to forage in the vicinity of the Plan area include blackshouldered kite, Northern hawker (*Circus cyaneus*), and Swainson's hawk (*Buteo swainsoni*). Birds species that could forage in agricultural ditches and sloughs include American coot (*Fulica americana*), mallard (*Anas platyrhynchos*), and red-winged blackbird (*Agelaius phoeniceus*).

Small terrestrial mammals that could inhabit the Plan area include Botta's pocket gopher (*Thomomys bottae*) and various species of mice, rats, and squirrels. Larger terrestrial mammals that could inhabit or transit through the Plan area include Beaver, Opossum, Skunk, Raccoon, and River otter. Several species of bats could occur within the Plan area. These species forage on insects over open fields, above tree canopies, and over open water. Bats could use man-made structures and spaces under bark of large trees for day roosts.

Invertebrate species of concern in the plan area include the Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*). The Valley elderberry longhorn beetle is a federally listed threatened species dependent on elderberry shrubs for its life cycle. Blue elderberry shrubs were observed along Jackson Slough near Jackson Slough Road. The Antioch dunes anthicid beetle and the Sacramento anthicid beetle require loose, sandy soils. Potential habitat for anthicid beetles in the plan area is very marginal and limited to small patches of sandy soils along the Sacramento River levee.

The Sacramento River supports important sport and commercial fisheries. Warmwater game fish found in the Sacramento River include channel catfish (*Ictalurus punctatus*) and white catfish (*Ictalurus catus*); largemouth, smallmouth, and spotted bass (*Micropterus salmonides*, *Micropterus dolomieu*, and *Micropterus punctulatus*); carp and various sunfishes (*Centrarchidae*). Native freshwater fish occurring in the Sacramento River include Sacramento perch, Sacramento roach, River lamprey, etc., as well as special-status species such as Delta smelt, Longfin smelt, Sacramento splittail, chinook salmon, and green sturgeon. The Delta smelt is a resident fish in the Delta around the City as well.

Historic and Cultural Resources

The City has registered federal historic sites, State landmarks and points of interest. These are shown in Table 1-10.

Table 1-10 Registered Historic Sites in the City of Isleton

Name (Landmark Plaque Number)	National Register	State Landmark	California Register	Point of Interest	Date Listed
Isleton Chinese And Japanese Commercial Districts (N1674)	X				3/14/1991

Source: California Office of Historical Preservation

The National Park Service administers two programs that recognize the importance of historic resources, specifically those pertaining to architecture and engineering. While inclusion in these programs does not give these structures any sort of protection, they are valuable historic assets.

The Historic American Buildings Survey (HABS) and Historic American Engineering Record (HAER) document America’s architectural and engineering heritage. The HABS and HAER structure in the City are listed below:

- Sacramento River Bridge, Spanning Sacramento River South of Locke, Isleton, Sacramento, CA

Growth and Development Trends

Past populations for the City of Isleton are shown in Table 1-11.

Table 1-11 Population History for City of Isleton

Year	Population	Increase	% Change From Prior Year
1970	909	–	–
1980	910	1	0.1%
1990	850	-60	-6.6%
2000	828	-22	-2.6%
2010	804	-24	-2.9%

Source: California Department of Finance

Land Use

The environmental setting of the Isleton Planning Area is dominated by the Sacramento River on the north, Georgiana Slough on the south and agricultural lands which border the City on the south, east, and west. The primary land use (108.6 acres) in the City is developed (urban and residential) land in the City of Isleton. Urban land covers most of the City. Urban habitat is concentrated along Tyler Island Bridge Road. Agricultural lands exist within the western part of the community immediately south of the City limits, and between the community and Georgiana Slough to the southeast and State Route 12 to the south and southwest. The first location involves approximately 37 acres all north of the extended westerly alignment of 6th Street. The second location involves several thousand acres outside of the City in productive

agricultural use and with much of the acreage under Williamson Act contracts with Sacramento County. Riparian woodland vegetation occurs along the Sacramento River.

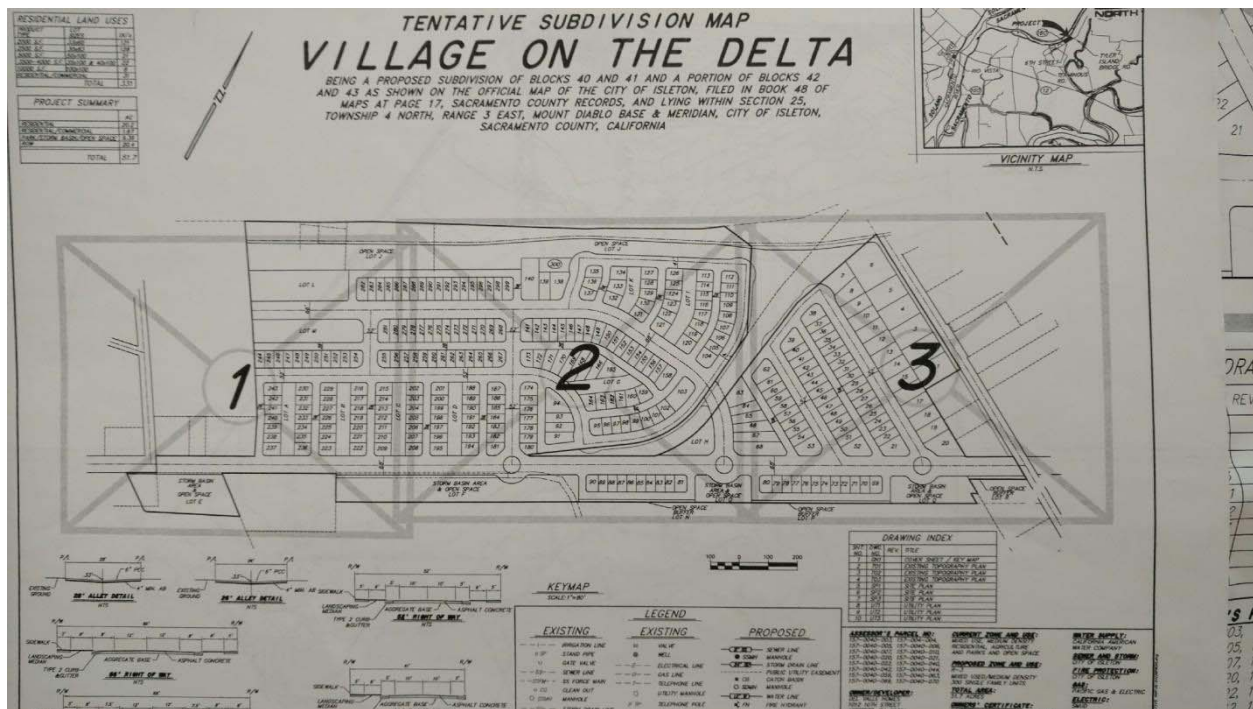
Isleton is a historical community, founded in 1874 by John Poole and Incorporated May 23, 1923. Many of the buildings within the City's old town are on the National Historical register, but are in need of repair. A new housing development area began construction in 2009, but has not been completed due to the recession and change of ownership hands. There are currently two city parks, a Central Park in old town and a softball complex and park on the Northwest side of town, both are in need of repair. There is an elementary school in Isleton. After elementary school, the children of Isleton are bussed to Walnut Grove. A privately owned trailer park within the city limits primarily houses elderly and very low-income persons. Agriculture, blue-collar service workers and food service are the primary industry; however, tourism is a significant economic driver for the community due to the location on the Delta loop and proximity to the waterways between Sacramento and the Pacific Ocean. There are many artists, writers and musicians within the community Isleton.

Future Development

The Sacramento Council on Governments (SACOG) modeled population projections for the City of Isleton and other areas of the region in 2012 for a Metropolitan Transportation Plan/Sustainable Communities Strategy report. This forecast uses a 2008 base year estimate with projections to 2020 and 2035 for population, housing units, households and employment. SACOG estimated the City population in 2020 and 2035 to be 730 and 894 respectively.

There is a new development that has been in the works since 2005. This development is called Village on the Delta. There is a proposed mixed used/medium density 300 single family units. The total area of the project is 51.7 acres.

Figure 1-3 Village on the Delta Subdivision Map



Source: City of Isleton

1.5.3. Vulnerability to Specific Hazards

This section provides the vulnerability assessment, including any quantifiable loss estimates, for those hazards identified above in Table 1-7 as high or medium significance hazards and primary hazards in the State of California. Impacts of past events and vulnerability of the City to specific hazards are further discussed below (see Section 4.1 Hazard Identification in the Base Plan for more detailed information about these hazards and their impacts on the Sacramento County Planning Area). Methodologies for calculating loss estimates are the same as those described in Section 4.3 of the Base Plan. In general, the most vulnerable structures are those located within the flood risk areas, unreinforced masonry buildings, and buildings built prior to the introduction of modern building codes.

An estimate of the vulnerability of the City to each identified priority hazard, in addition to the estimate of risk of future occurrence, is provided in each of the hazard-specific sections that follow. Vulnerability is measured in general, qualitative terms and is a summary of the potential impact based on past occurrences, spatial extent, and damage and casualty potential. It is categorized into the following classifications:

- **Extremely Low**—The occurrence and potential cost of damage to life and property is very minimal to nonexistent.
- **Low**—Minimal potential impact. The occurrence and potential cost of damage to life and property is minimal.
- **Medium**—Moderate potential impact. This ranking carries a moderate threat level to the general population and/or built environment. Here the potential damage is more isolated and less costly than a more widespread disaster.

- **High**—Widespread potential impact. This ranking carries a high threat to the general population and/or built environment. The potential for damage is widespread. Hazards in this category may have occurred in the past.
- **Extremely High**—Very widespread with catastrophic impact.

Climate Change

Likelihood of Future Occurrence—Likely

Vulnerability—Medium

Hazard Profile and Problem Description

Climate change will require the City of Isleton to prepare for warmer and more extreme temperatures, decreased water supply, drought, flooding, increasing energy and water demand, and public health risks. In California average temperatures are projected to rise as much as 9 degrees Fahrenheit by 2100.

Past Occurrences

- 1973-47: La Nina
- 1975-76: La Nina
- 1982-83: El Nino
- 1988-89: La Nina
- 1997-98: El Nino
- 2006: California Heat Wave
- 2012-15: North American Drought
- 2015-16: El Nino

Vulnerability to Climate Change

The City’s population, resources, and economy are vulnerable to climate change impacts, particularly those associated with flooding and extreme heat. Without reduction strategies in place, county-wide greenhouse gases (GHG) emissions are anticipated to increase based on the Planning Area’s anticipated growth.

Future Development

The City of Isleton is committed to meeting State standards for the reduction of greenhouse gas emissions to achieve sustainable land use. The places we live, the methods used to construct our homes, and where we work dictate how far and by what means we travel and how much energy we use. The City will evaluate the use of sustainable land use and growth principals when considering future development.

Drought and Water Shortage

Likelihood of Future Occurrence–Likely

Vulnerability–High

Hazard Profile and Problem Description

Drought is a gradual phenomenon. Although droughts are sometimes characterized as emergencies, they differ from typical emergency events. Most natural disasters, such as floods or forest fires, occur relatively rapidly and afford little time for preparing for disaster response. Droughts occur slowly, over a multi-year period, and it is often not obvious or easy to quantify when a drought begins and ends. Water districts normally require at least a 10 year planning horizon to implement a multiagency improvement project to mitigate the effects of a drought and water supply shortage.

Past Occurrences

The past occurrences of drought to the City are the same as those of the County. A list of past occurrences can be found in Section 4.2.11 of the Base Plan.

Vulnerability to Drought and Water Shortage

The City of Isleton receives its drinking water from a well. With the drought and water shortage there is the likelihood of shortages of drinking water to the City’s residents if groundwater tables lower beyond the depth of the well.

The main asset at risk due to water shortage would be the cities’ Wastewater Treatment Plant. Water is the conveyance method used to expel the waste from the cities’ sewer system. During a water shortage or drought restrictions could be put in place that would not supply the adequate water supply necessary to keep the waste suspended long enough to reach the wastewater plant. If the solids fall out of the stream waste could possibly build up in the sewer lines causing a plug. This could lead to backups into homes onto the streets and create a health hazard.

Critical Facilities at Risk

Drought typically does not affect structures, therefore no critical facilities are at risk to drought and water shortage.

Future Development

As the population in the area continues to grow, so will the demand for water. Water shortages in the future may be worsened by drought, as the City relies on surface water for its water source. Increased planning will be needed to account for population growth and increased water demands.

Flood: 100/200/500-year

Likelihood of Future Occurrence—Occasional

Vulnerability—Very High

Hazard Profile and Problem Description

General rain floods emanating from the Sacramento and San Joaquin River basins results from prolonged heavy rainfall over tributary areas, and is characterized by high peak flows of moderate duration and by a large volume of runoff. Flooding is more severe when antecedent rainfall has resulted in saturated ground conditions, when the ground in tributary areas is frozen and infiltration is minimal, or when rain or snow in the high elevations adds snowmelt to rain-flood runoff.

Snowmelt floods on the Sacramento and the San Joaquin Rivers and their higher elevation tributaries can be expected to occur during the period from April through June. Although snowmelt flooding is of much larger volume and longer duration than flooding from rain, it does not have the high peak flows characteristic of floods from rain. Snowmelt flood runoff is sometimes augmented by late spring rains on the snowfields or lower elevation tributary watersheds.

More information on flooding in the City can be found in the Levee Failure section below.

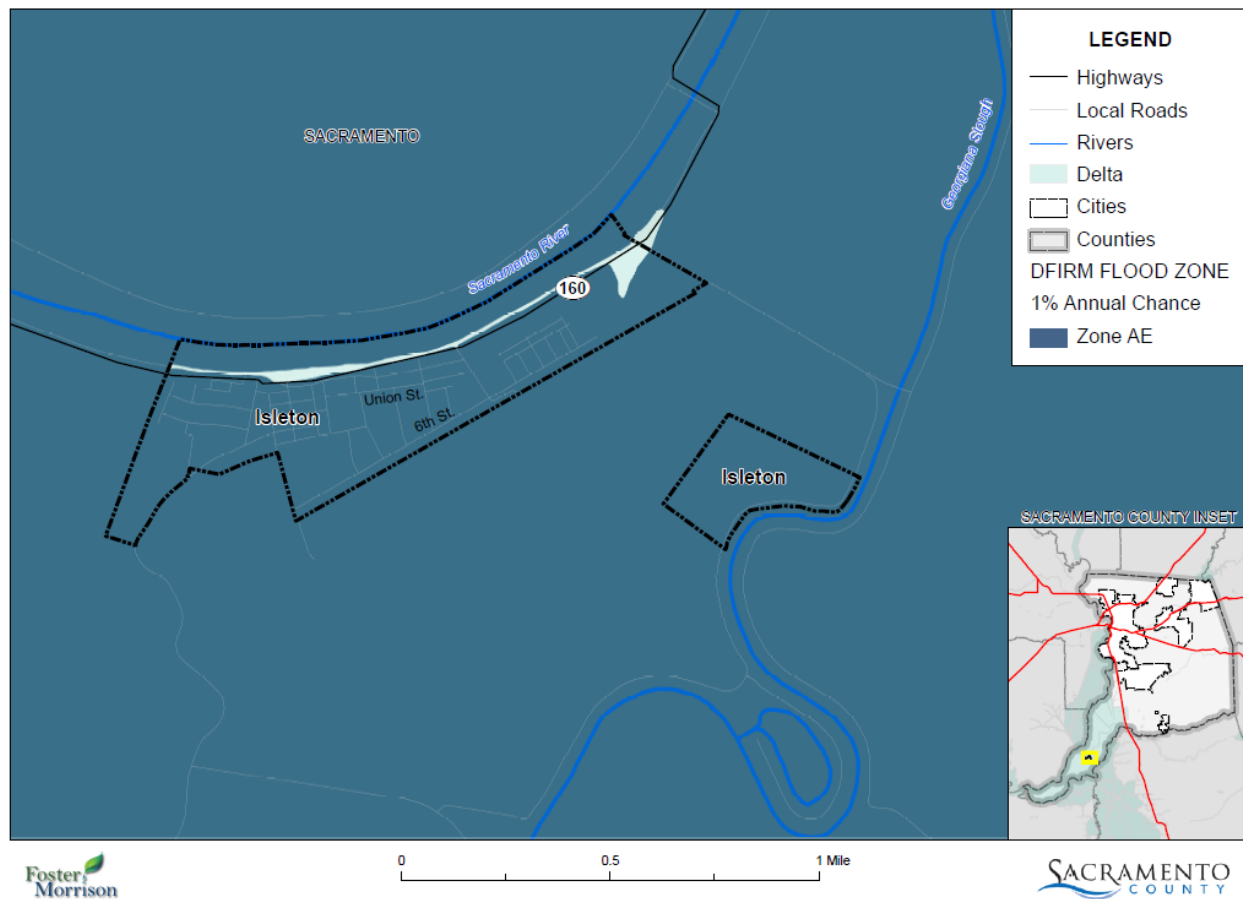
Past Occurrences

Past flooding in the City of Isleton area has been due to levee failures caused by the separate or coincidental occurrence of very high tides and high stream outflow through the delta region, or from unexplained levee failures apparently not related to these phenomena. As such, the past occurrences of flood in the City of Isleton can be found in the Levee Failure section below.

Flood Zones

The City is almost entirely located in an AE Zone (1% annual chance). A small area of the City is located outside designated flood zones in the X Zone. This is seen in Figure 1-4.

Figure 1-4 City of Isleton – FEMA DFIRM Flood Zones



Data Source: Sacramento County GIS, Cal-Atlas, FEMA NFHL 04/16/2016; Map Date: 05/2016.

Vulnerability to Flood

The lower reaches of the Sacramento and San Joaquin Rivers and the entire Delta area are under the influence of the tides. The most severe flood conditions in the City of Isleton area would result when very high tide and large volume of stream outflow occur coincidentally, and strong onshore winds generate wave action.

Values at Risk

GIS was used to determine the possible impacts of flooding within the City of Isleton. The methodology described in Section 4.3.10 of the Base Plan was followed in determining structures and values at risk to the 1% (100-year) and 0.2% (500-year) annual chance flood event. Table 1-12 shows the property use, improved parcel count, improved values, estimated contents, total values and estimated loss of parcels that fall in a floodplain in the City.

Table 1-12 City of Isleton – Count and Improved Values by Property Use and Detailed Flood Zone

Property Use	Total Parcel Count	Improved Parcel Count	Total Land Value	Improved Structure Value	Estimated Contents Value	Total Value
Zone A						
Agricultural	0	0	\$0	\$0	\$0	\$0
Care / Health	0	0	\$0	\$0	\$0	\$0
Church / Welfare	0	0	\$0	\$0	\$0	\$0
Industrial	0	0	\$0	\$0	\$0	\$0
Miscellaneous	0	0	\$0	\$0	\$0	\$0
NO DATA	0	0	\$0	\$0	\$0	\$0
Office	0	0	\$0	\$0	\$0	\$0
Public / Utilities	0	0	\$0	\$0	\$0	\$0
Recreational	0	0	\$0	\$0	\$0	\$0
Residential	0	0	\$0	\$0	\$0	\$0
Retail / Commercial	0	0	\$0	\$0	\$0	\$0
Vacant	0	0	\$0	\$0	\$0	\$0
Total	0	0	\$0	\$0	\$0	\$0
Zone AE						
Agricultural	1	0	\$10,642	\$0	\$10,642	\$21,284
Care / Health	0	0	\$0	\$0	\$0	\$0
Church / Welfare	8	8	\$126,424	\$725,325	\$126,424	\$978,173
Industrial	7	6	\$593,783	\$644,468	\$890,675	\$2,128,926
Miscellaneous	13	0	\$8,356	\$0	\$8,356	\$16,712
NO DATA	0	0	\$0	\$0	\$0	\$0
Office	4	3	\$138,956	\$302,405	\$138,956	\$580,317
Public / Utilities	30	1	\$802,735	\$30,000	\$802,735	\$1,635,470
Recreational	0	0	\$0	\$0	\$0	\$0
Residential	248	244	\$8,348,129	\$19,624,248	\$4,174,065	\$32,146,442
Retail / Commercial	59	57	\$1,886,335	\$5,714,640	\$1,886,335	\$9,487,310
Vacant	134	6	\$3,691,768	\$32,963	\$0	\$3,724,731
Total	504	325	\$15,607,128	\$27,074,049	\$8,038,187	\$50,719,364
Zone AH						
Agricultural	0	0	\$0	\$0	\$0	\$0
Care / Health	0	0	\$0	\$0	\$0	\$0

Property Use	Total Parcel Count	Improved Parcel Count	Total Land Value	Improved Structure Value	Estimated Contents Value	Total Value
Church / Welfare	0	0	\$0	\$0	\$0	\$0
Industrial	0	0	\$0	\$0	\$0	\$0
Miscellaneous	0	0	\$0	\$0	\$0	\$0
NO DATA	0	0	\$0	\$0	\$0	\$0
Office	0	0	\$0	\$0	\$0	\$0
Public / Utilities	0	0	\$0	\$0	\$0	\$0
Recreational	0	0	\$0	\$0	\$0	\$0
Residential	0	0	\$0	\$0	\$0	\$0
Retail / Commercial	0	0	\$0	\$0	\$0	\$0
Vacant	0	0	\$0	\$0	\$0	\$0
Total	0	0	\$0	\$0	\$0	\$0
Zone AO						
Agricultural	0	0	\$0	\$0	\$0	\$0
Care / Health	0	0	\$0	\$0	\$0	\$0
Church / Welfare	0	0	\$0	\$0	\$0	\$0
Industrial	0	0	\$0	\$0	\$0	\$0
Miscellaneous	0	0	\$0	\$0	\$0	\$0
NO DATA	0	0	\$0	\$0	\$0	\$0
Office	0	0	\$0	\$0	\$0	\$0
Public / Utilities	0	0	\$0	\$0	\$0	\$0
Recreational	0	0	\$0	\$0	\$0	\$0
Residential	0	0	\$0	\$0	\$0	\$0
Retail / Commercial	0	0	\$0	\$0	\$0	\$0
Vacant	0	0	\$0	\$0	\$0	\$0
Total	0	0	\$0	\$0	\$0	\$0
Zone A99						
Agricultural	0	0	\$0	\$0	\$0	\$0
Care / Health	0	0	\$0	\$0	\$0	\$0
Church / Welfare	0	0	\$0	\$0	\$0	\$0
Industrial	0	0	\$0	\$0	\$0	\$0
Miscellaneous	0	0	\$0	\$0	\$0	\$0
NO DATA	0	0	\$0	\$0	\$0	\$0

Property Use	Total Parcel Count	Improved Parcel Count	Total Land Value	Improved Structure Value	Estimated Contents Value	Total Value
Office	0	0	\$0	\$0	\$0	\$0
Public / Utilities	0	0	\$0	\$0	\$0	\$0
Recreational	0	0	\$0	\$0	\$0	\$0
Residential	0	0	\$0	\$0	\$0	\$0
Retail / Commercial	0	0	\$0	\$0	\$0	\$0
Vacant	0	0	\$0	\$0	\$0	\$0
Total	0	0	\$0	\$0	\$0	\$0
Total 1%	504	325	\$15,607,128	\$27,074,049	\$17,551,196	\$60,232,373
0.2% Annual Chance Flood Zone*						
Agricultural	0	0	\$0	\$0	\$0	\$0
Care / Health	0	0	\$0	\$0	\$0	\$0
Church / Welfare	0	0	\$0	\$0	\$0	\$0
Industrial	0	0	\$0	\$0	\$0	\$0
Miscellaneous	0	0	\$0	\$0	\$0	\$0
NO DATA	0	0	\$0	\$0	\$0	\$0
Office	0	0	\$0	\$0	\$0	\$0
Public / Utilities	0	0	\$0	\$0	\$0	\$0
Recreational	0	0	\$0	\$0	\$0	\$0
Residential	0	0	\$0	\$0	\$0	\$0
Retail / Commercial	0	0	\$0	\$0	\$0	\$0
Vacant	0	0	\$0	\$0	\$0	\$0
Total	0	0	\$0	\$0	\$0	\$0
X Protected by Levee Zone						
Agricultural	0	0	\$0	\$0	\$0	\$0
Care / Health	0	0	\$0	\$0	\$0	\$0
Church / Welfare	0	0	\$0	\$0	\$0	\$0
Industrial	0	0	\$0	\$0	\$0	\$0
Miscellaneous	0	0	\$0	\$0	\$0	\$0
NO DATA	0	0	\$0	\$0	\$0	\$0
Office	0	0	\$0	\$0	\$0	\$0
Public / Utilities	0	0	\$0	\$0	\$0	\$0
Recreational	0	0	\$0	\$0	\$0	\$0

Property Use	Total Parcel Count	Improved Parcel Count	Total Land Value	Improved Structure Value	Estimated Contents Value	Total Value
Residential	0	0	\$0	\$0	\$0	\$0
Retail / Commercial	0	0	\$0	\$0	\$0	\$0
Vacant	0	0	\$0	\$0	\$0	\$0
Total	0	0	\$0	\$0	\$0	\$0
Zone X						
Agricultural	0	0	\$0	\$0	\$0	\$0
Care / Health	0	0	\$0	\$0	\$0	\$0
Church / Welfare	0	0	\$0	\$0	\$0	\$0
Industrial	1	1	\$54,286	\$227,796	\$81,429	\$363,511
Miscellaneous	1	0	\$61	\$0	\$61	\$122
NO DATA	0	0	\$0	\$0	\$0	\$0
Office	1	1	\$236,284	\$289,986	\$236,284	\$762,554
Public / Utilities	5	0	\$29,687	\$0	\$29,687	\$59,374
Recreational	0	0	\$0	\$0	\$0	\$0
Residential	3	3	\$417,149	\$766,261	\$208,575	\$1,391,985
Retail / Commercial	4	4	\$206,668	\$194,612	\$206,668	\$607,948
Vacant	6	0	\$322,078	\$0	\$0	\$322,078
Total	21	9	\$1,266,213	\$1,478,655	\$762,704	\$3,507,572

Source: FEMA 6/16/2015 DFIRM, Sacramento County 2016 Parcel/2015 Assessor's Data

*This parcel count only includes those parcels in the 0.2% annual chance floodplain, exclusive of the 1% annual chance floodplain. The 0.2% annual chance flood will also include all parcels in the 1% annual chance floodplain.

Table 1-13 summarizes Table 1-12 above and shows City of Isleton loss estimates and shows improved values at risk by FEMA 1% and 0.2% annual chance flood zones. As shown in this table, there is no 500-year flood risk in the City.

Table 1-13 City of Isleton – Flood Loss Summary

Flood Zone	Improved Parcel Count	Total Improved Value	Estimated Contents Value	Total Improved/ Contents Value	Loss Estimate	Loss Ratio
1% Annual Chance	325	\$27,074,049	\$17,551,196	\$44,625,245.00	\$8,925,049	13.90%
0.2% Annual Chance *	0	\$0	\$0	\$0	\$0	0.0%

Source: FEMA 6/16/2015 DFIRM, Sacramento County 2016 Parcel/2015 Assessor's Data

*This parcel count only includes those parcels in the 0.2% annual chance floodplain, exclusive of the 1% annual chance floodplain. The 0.2% annual chance flood will also include all parcels in the 1% annual chance floodplain.

According to Table 1-12 and Table 1-13, the City of Isleton has 325 improved parcels and \$60,232,373 of structure and contents value in the 1% annual chance floodplain. These values can be refined a step further. Applying the 20 percent damage factor as previously described in Section 4.3.7 of the Base Plan, there is a 1% chance in any given year of a flood event causing roughly \$8,925,049 in damage in the City of Isleton. A loss ratio of 13.9% indicates that losses in Isleton to flood would be relatively major, as almost a seventh of the total values in the City would be damaged.

Flooded Acres

Also of interest is the land area affected by the various flood zones. The following is an analysis of flooded acres in the City in comparison to total area within the City limits. The same methodology, as discussed in Section 4.3.7 of the Base Plan, was used for the City of Isleton as well as for the County as a whole. Table 1-14 represents a detailed and summary analysis of total acres for each FEMA DFIRM flood zone in the City.

Table 1-14 City of Isleton – Flooded Acres

Flood Zone	Property Use	Total Flooded Acres	Improved Flooded Acres	% of Improved Flooded Acres
A	Agricultural	0	0	0.00%
	Care / Health	0	0	0.00%
	Church / Welfare	0	0	0.00%
	Industrial	0	0	0.00%
	Miscellaneous	0	0	0.00%
	No Data	0	0	0.00%
	Office	0	0	0.00%
	Public / Utilities	0	0	0.00%
	Recreational	0	0	0.00%
	Residential	0	0	0.00%
	Retail / Commercial	0	0	0.00%
	Vacant	0	0	0.00%
	Total		0	0
AE	Agricultural	2.56	0	0.00%
	Care / Health	0	0	0.00%
	Church / Welfare	2.20	2.20	3.83%
	Industrial	10.57	10.18	17.71%
	Miscellaneous	8.02	0	0.00%
	No Data	0	0	0.00%
	Office	0.56	0.43	0.74%
	Public / Utilities	77.26	0.08	0.13%
	Recreational	0	0	0.00%

Flood Zone	Property Use	Total Flooded Acres	Improved Flooded Acres	% of Improved Flooded Acres
	Residential	35.18	35.00	60.92%
	Retail / Commercial	6.72	6.30	10.97%
	Vacant	72.52	3.27	5.70%
	Total	215.58	57.46	100.00%
AH	Agricultural	0	0	0.00%
	Care / Health	0	0	0.00%
	Church / Welfare	0	0	0.00%
	Industrial	0	0	0.00%
	Miscellaneous	0	0	0.00%
	No Data	0	0	0.00%
	Office	0	0	0.00%
	Public / Utilities	0	0	0.00%
	Recreational	0	0	0.00%
	Residential	0	0	0.00%
	Retail / Commercial	0	0	0.00%
	Vacant	0	0	0.00%
	Total	0	0	0.00%
AO	Agricultural	0	0	0.00%
	Care / Health	0	0	0.00%
	Church / Welfare	0	0	0.00%
	Industrial	0	0	0.00%
	Miscellaneous	0	0	0.00%
	No Data	0	0	0.00%
	Office	0	0	0.00%
	Public / Utilities	0	0	0.00%
	Recreational	0	0	0.00%
	Residential	0	0	0.00%
	Retail / Commercial	0	0	0.00%
	Vacant	0	0	0.00%
	Total	0	0	0.00%
A99	Agricultural	0	0	0.00%
	Care / Health	0	0	0.00%
	Church / Welfare	0	0	0.00%
	Industrial	0	0	0.00%
	Miscellaneous	0	0	0.00%
	No Data	0	0	0.00%

Flood Zone	Property Use	Total Flooded Acres	Improved Flooded Acres	% of Improved Flooded Acres
	Office	0	0	0.00%
	Public / Utilities	0	0	0.00%
	Recreational	0	0	0.00%
	Residential	0	0	0.00%
	Retail / Commercial	0	0	0.00%
	Vacant	0	0	0.00%
	Total	0	0	0.00%
Total 1%		215.58	57.46	100.00%
Shaded X (0.2% Annual Chance)*	Agricultural	0	0	0.00%
	Care / Health	0	0	0.00%
	Church / Welfare	0	0	0.00%
	Industrial	0	0	0.00%
	Miscellaneous	0	0	0.00%
	No Data	0	0	0.00%
	Office	0	0	0.00%
	Public / Utilities	0	0	0.00%
	Recreational	0	0	0.00%
	Residential	0	0	0.00%
	Retail / Commercial	0	0	0.00%
	Vacant	0	0	0.00%
	Total	0	0	0.00%
Total 0.2%		0	0	0.00%
X Protected by Levee	Agricultural	0	0	0.00%
	Care / Health	0	0	0.00%
	Church / Welfare	0	0	0.00%
	Industrial	0	0	0.00%
	Miscellaneous	0	0	0.00%
	No Data	0	0	0.00%
	Office	0	0	0.00%
	Public / Utilities	0	0	0.00%
	Recreational	0	0	0.00%
	Residential	0	0	0.00%

Flood Zone	Property Use	Total Flooded Acres	Improved Flooded Acres	% of Improved Flooded Acres
	Retail / Commercial	0	0	0.00%
	Vacant	0	0	0.00%
	Total	0	0	0.00%
X	Agricultural	0	0	0.00%
	Care / Health	0	0	0.00%
	Church / Welfare	0	0	0.00%
	Industrial	0.36	0.36	12.55%
	Miscellaneous	0.13	0	0.00%
	No Data	0	0	0.00%
	Office	0.19	0.19	6.54%
	Public / Utilities	1.06	0	0.00%
	Recreational	0	0	0.00%
	Residential	0.90	0.90	31.33%
	Retail / Commercial	1.43	1.43	49.58%
	Vacant	2.08	0	0.00%
	Total	6.16	2.88	100.00%

Source: FEMA 6/16/2015 DFIRM, Sacramento County 2016 Parcel/2015 Assessor's Data

*This parcel count only includes those parcels in the 0.2% annual chance floodplain, exclusive of the 1% annual chance floodplain. The 0.2% annual chance flood will also include all parcels in the 1% annual chance floodplain.

Population at Risk

The DFIRM flood zones were overlaid on the parcel layer. Those residential parcel centroids that intersect the severity zones were counted and multiplied by the 2010 Census Bureau average household factors for Isleton. According to this analysis, there is a total population of 593 residents of the City at risk to flooding, all in the 1% annual chance floodplain. This is shown in Table 1-15.

Table 1-15 City of Isleton – Count of Improved Residential Parcels and Population by Flood Zone

Flood Zone	Improved Residential Parcels	Population*
AE (1% Annual Chance)	244	593
Shaded X (0.2% Annual Chance)*	0	0

Source: FEMA 6/16/2015 DFIRM, Sacramento County 2016 Parcel/2015 Assessor's Data, 2010 US Census Bureau

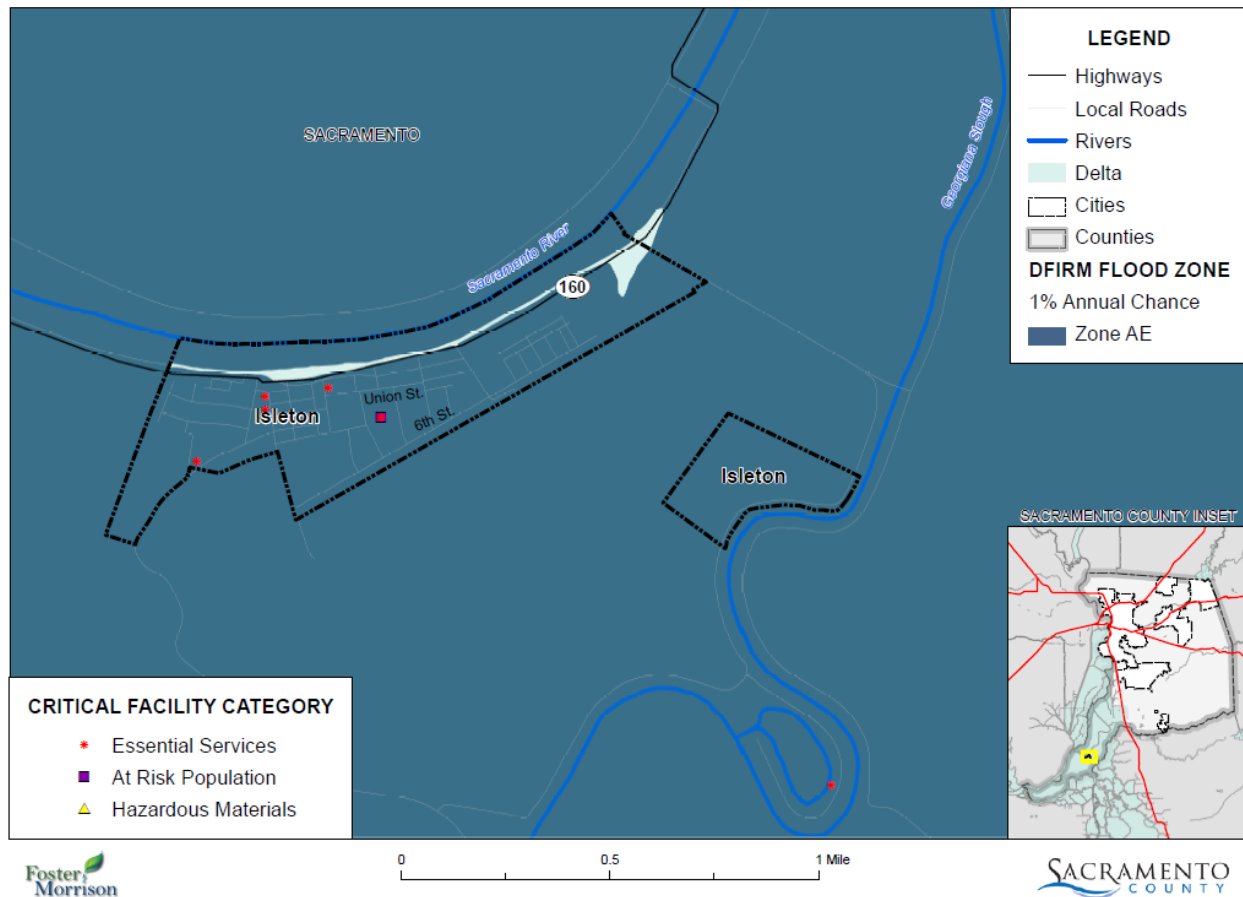
* Average household populations from the 2010 US Census were used: Isleton– 2.43.

**This parcel count only includes those parcels in the 0.2% annual chance floodplain, exclusive of the 1% annual chance floodplain. The 0.2% annual chance flood will also include all parcels in the 1% annual chance floodplain.

Critical Facilities at Risk

An analysis was performed on the critical facility inventory in Isleton in identified FEMA DFIRMs. GIS was used to determine whether the facility locations intersects a DFIRM flood hazard areas, and if so, which zone it intersects. Details of critical facilities in the floodplain in the City of Isleton are shown in Figure 1-5 and Table 1-16. As shown on the table and figure, Isleton has 6 critical facilities located in 1% annual chance and no critical facilities in the 0.2% annual chance DFIRM flood zones. Details of critical facility definition, type, name and address and jurisdiction by flood zone are listed in Appendix E.

Figure 1-5 City of Isleton – Critical Facilities and Flood Zones



Data Source: Sacramento County GIS, Cal-Atlas, FEMA NFHL 04/16/2016; Map Date: 05/2016.

Table 1-16 City of Isleton – Critical Facilities and Flood Zones

Flood Zone	Critical Facility Definition	Facility Count
A	Essential Services Facilities	0
	At Risk Population Facilities	0
	Hazardous Materials Facilities	0
	Total	0
A99	Essential Services Facilities	0

Flood Zone	Critical Facility Definition	Facility Count
	At Risk Population Facilities	0
	Hazardous Materials Facilities	0
	Total	0
AE	Essential Services Facilities	5
	At Risk Population Facilities	1
	Hazardous Materials Facilities	0
	Total	6
AH	Essential Services Facilities	0
	At Risk Population Facilities	0
	Hazardous Materials Facilities	0
	Total	0
0.2% Annual Chance*	Essential Services Facilities	0
	At Risk Population Facilities	0
	Hazardous Materials Facilities	0
	Total	0
X	Essential Services Facilities	0
	At Risk Population Facilities	0
	Hazardous Materials Facilities	0
	Total	0
X Protected by Levee	Essential Services Facilities	0
	At Risk Population Facilities	0
	Hazardous Materials Facilities	0
	Total	0
Grand Total		166

Source: FEMA 6/16/2015 DFIRM, Sacramento County GIS

*This count only includes those critical facilities in the 0.2% annual chance floodplain, exclusive of the 1% annual chance floodplain. The 0.2% annual chance flood will also include all critical facilities in the 1% annual chance floodplain.

Insurance Coverage, Claims Paid, and Repetitive Losses

The City of Isleton joined the National Flood Insurance Program (NFIP) on December 1, 1978. The City does not participate in the CRS program. NFIP data indicates that as of February 19, 2016, there were 124 flood insurance policies in force in the City with \$23,489,300 of coverage. Of the 124 policies, 117 were residential (single-family homes) and 7 was non-residential; 122 of the policies were in A zones (the remaining 2 were in B, C, and X zones). The GIS parcel analysis detailed above identified 325 parcels in

the 100-year flood zone. 122 policies for 325 parcels in the 100-year floodplain equates to insurance coverage of 37.5 percent. There have been 13 historical claims for flood losses in the City, totaling \$457,108.20 in losses. 10 of these losses were pre-FIRM, 2 were post-FIRM, and 1 was unknown. 6 of these losses were considered substantial damage claims. There are no repetitive loss or severe repetitive loss buildings in the City.

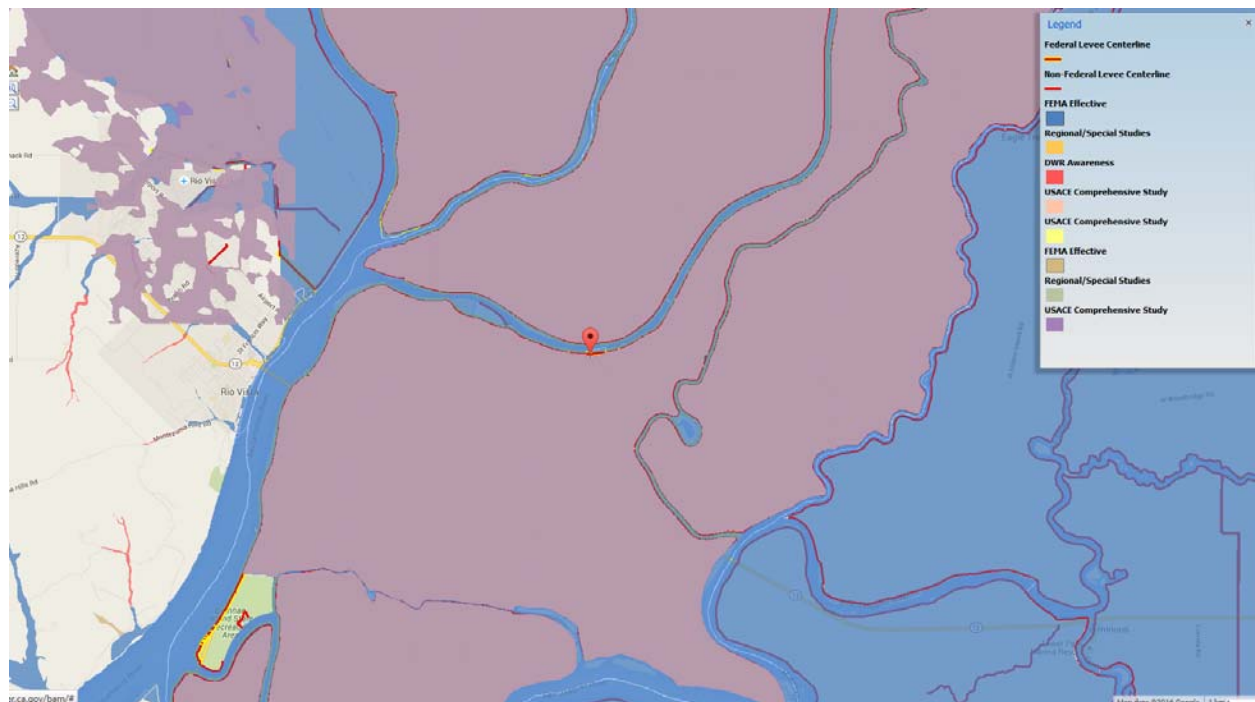
California Department of Water Resources Best Available Maps (BAM)

The FEMA regulatory maps provide just one perspective on flood risks in Sacramento County. Senate Bill 5 (SB 5), enacted in 2007, authorized the California DWR to develop the Best Available Maps (BAM) displaying 100- and 200-year floodplains for areas located within the Sacramento-San Joaquin (SAC-SJ) Valley watershed. SB 5 requires that these maps contain the best available information on flood hazards and be provided to cities and counties in the SAC-SJ Valley watershed. This effort was completed by DWR in 2008. DWR has expanded the BAM to cover all counties in the State and to include 500-year floodplains.

Different than the FEMA DFIRMs which have been prepared to support the NFIP and reflect only the 100-year event risk, the BAMs are provided for informational purposes and are intended to reflect current 100-, 200-, and 500-year event risks using the best available data. The 100-year floodplain limits on the BAM are a composite of multiple 100-year floodplain mapping sources. It is intended to show all currently identified areas at risk for a 100-year flood event, including FEMA's 100-year floodplains. The BAM are comprised of different engineering studies performed by FEMA, Corps, and DWR for assessment of potential 100-, 200-, and 500-year floodplain areas. These studies are used for different planning and/or regulatory applications. They are for the same flood frequency, however, they may use varied analytical and quality control criteria depending on the study type requirements.

The value in the BAMs is that they provide a bigger picture view of potential flood risk to the City than that provided in the FEMA DFIRMs. This provides the community and residents with an additional tool for understanding potential flood hazards not currently mapped as a regulated floodplain. Improved awareness of flood risk can reduce exposure to flooding for new structures and promote increased protection for existing development. Informed land use planning will also assist in identifying levee maintenance needs and levels of protection. By including the FEMA 100-year floodplain, it also supports identification of the need and requirement for flood insurance. The BAM map for Isleton is shown in Figure 1-6.

Figure 1-6 City of Isleton Best Available Map



Source: California DWR

Legend explanation: Blue - FEMA 100-Year, Orange – Local 100-Year (developed from local agencies), Red – DWR 100-year (Awareness floodplains identify the 100-year flood hazard areas using approximate assessment procedures.), Pink – USACE 100-Year (2002 Sac and San Joaquin River Basins Comp Study), Yellow – USACE 200-Year (2002 Sac and San Joaquin River Basins Comp Study), Tan – FEMA 500-Year, Grey – Local 500-Year (developed from local agencies), Purple – USACE 500-Year (2002 Sac and San Joaquin River Basins Comp Study).

Natural Resources at Risk

Due to the expected nature of the flooding that could occur in the City, all natural resources are at risk to flood.

Historic and Cultural Resources at Risk

Due to the expected nature of the flooding that could occur in the City, all historic and cultural resources are at risk to flood.

Future Development

The City enforces the floodplain ordinance. If any development is to occur in the floodplain, it would have to conform to the elevation standards of the floodplain ordinance. Village on the Delta is a 51.7 acre planned subdivision that was started in 2004. There is a total of 51.7 acres with 20.2 acres designated residential 1.67 acres designated residential/commercial 9.39 acres designated park/storm basin/open space and 20.4 acres designated R.O.W. The subdivision conforms to the floodplain ordinance.

Flood: Localized Stormwater Flooding

Likelihood of Future Occurrence–Highly Likely

Vulnerability–Medium

Hazard Profile and Problem Description

Localized flooding occurs at various times throughout the year and there are several areas of concern unique to the City. Historically, the City has been at risk of flooding primarily during the spring months when the waterway/creek systems swell with heavy rainfall. This may produce local street flooding due to high water in the waterway/creek systems causing outfalls to back-up into the drainage inlets.

To some extent, drainage from roofs and private properties has in the past been allowed to be funneled into the sewage collection system, adding to problems of sewage treatment during wet weather. Fortunately, much of the latter problem has been corrected by City inspection and notice to owners.

Past Occurrences

The East Isleton area/rural region has localized flooding which is widespread but generally minor; the flat land causes floodwaters to spread out reducing threats to life. These areas of potential concern are included in Table 1-17. In this area, roadside ditches and culverts lack capacity and are prone to blockages from debris.

During heavy rainfall, Isleton has three areas of concern. At Jackson and 4th, there is a drainage inlet that gets overwhelmed with runoff and causes ponding that reaches into the intersection. At Highway 160 and A St. there is another drainage inlet that gets overwhelmed with rain water that causes 160 to flood. On Union St. between D St and E St the City has problems with ponding due to excessive runoff.

Vulnerability to Localized Flooding

Assets at Risk

Table 1-17 identifies known and past occurrences of such areas and the associated problems encountered. This list is an initial inventory of key problem areas and is not intended to be a complete inventory of all problems and locations associated with severe weather events and localized flooding in the City of Isleton.

Table 1-17 City of Isleton’s Road List of Localized Flooding Problem Areas

Road Name	Flooding	Pavement Deterioration	Washout	High Water	Landslide/ Mudslide	Debris	Downed Trees
Jackson Blvd	X			X			
Hwy 160	X	X		X			
Union St	X	X		X			

Source: City of Isleton

Future Development

Future development in the City will add more impervious surfaces and need to drain those waters. The City will need to be proactive to ensure that increased development has proper siting and drainage for stormwaters. The risk of localized flooding to future development can also be minimized by accurate recordkeeping of repetitive localized storm activity. Mitigating the root causes of the localized stormwater flooding will reduce future risks of losses.

The City of Isleton has taken measures to prevent storm water flooding by doing the following:

- Replaced damaged and crushed culvert pipes to help the flow of storm water to the reclamation ditches
- Removed and cleared all debris from storm water drainage ditches.

On an annual basis we bring in a vacuum truck and clean out all storm water collection basins throughout the city. We have replaced or repaired the drainage basins grates to help prevent debris clogs. During the fall the city employees temp help to sweep leaves and all other debris from gutters to prevent this material from causing drain blockages.

Levee Failure

Likelihood of Future Occurrence—Occasional

Vulnerability—Very High

Hazard Profile and Problem Description

Floods can threaten the City from several sources. Usually, the possibility of flooding can be anticipated from eight to twenty hours before the “Emergency Period” is reached. However, as demonstrated in Linda, California, in February 1986, it is possible for a levee to collapse with little or no warning when there are still four or more feet of freeboard available.

Generally, levees fail due to overtopping or collapse. A catastrophic levee failure resulting from collapse probably will occur very quickly with relatively little warning. Such a failure would occur where the levee is saturated and the high hydrostatic water pressure on the river side, coupled with erosion of the levee from high water flows or an inherent defect in the levee, causes an almost instant collapse of a portion of the levee. Under such circumstances, structures located relatively near the break will suffer immediate and extensive damage. Several hundred yards away from the break the energy of the flood waters will be dispersed sufficiently to reduce, but not eliminate, flooding damage to structures in its path. The flood water will flow in a relatively shallow path toward any low point in the affected area. Flood water will collect in these low areas and the levels will rise as the flow continues. When the rivers are high, it is not possible to close or repair a levee break until the water surface in the river and the flooded area equalize.

The City has participated in FEMA’s Map Modernization Project and the requirements of Title 44 of the Federal Code of Regulations (CFR), Section 65.10 of the National Flood Insurance Program (NFIP) regulations to certify the Laguna West levee system. The Laguna West levee system meets the design, operation and maintenance criteria set forth 44 CFR Section 65.10.

The City's implements levee operation and maintenance activities which provide maintenance recommendations and requirements for specific levee inspections and maintenance operations. Levee inspections and maintenance activities include vegetation control, rutting/depressions, erosion control, slope stability, cracking, rodent control, encroachments/excavation, riprap revetments/banks, closure structures, underseepage relief wells/toe drainage system, seepage/sand boils, debris removal, roadway crown, utilities, minor structures, and mosquito abatement.

Past Occurrences

The 1950 and 1955 floods were outstanding in peak outflows through the delta and several islands were flooded. The City of Isleton, however, was not affected. In December 1965 and January 1965, the coincidental occurrence of very high tides and heavy inflow resulted in unusually high stages on all delta waterways. Concurrent strong onshore winds generated high waves that created very perilous conditions for many islands. Levees protecting Twitchell Island were seriously threatened by erosion and overtopping, but a massive flood fighting effort prevented overflow, destruction of levees and inundation of the City of Isleton.

The HMPC noted that in 1972, a levee break flooded areas of the City. The levee separating Andrus Island and the San Joaquin River failed from unknown causes in June 1972, resulting in the flooding of Andrus and Brannan Islands (including the City of Isleton). High winds had occurred prior to the break, but there had been no antecedent rainfall and the tidal cycle was not on the higher side. Approximately 200,000 acre-feet of water from the San Joaquin River inundated Andrus and Brannan Islands. Activities to fight floods to protect the City of Isleton proved to be a losing battle, and almost all of the city was flooded. The entire population was evacuated, with some residents not being able to return to their homes for 4 months. Approximately one-half of the housing units in the city were damaged or destroyed. About 15,000 acres were inundated and flood damages for the event approximated \$30 million. Specific damages values for the City were unavailable.

Vulnerability to Levee Failure

A major overtopping of a levee, if flow persists, will result in severe erosion of the levee crowns on the landward side and cause levee failure over a period of minutes to several hours. A severe levee overtopping can, therefore, be considered as a levee break for the purpose of determining the extent of flooding that any area will suffer. Generally, overtopping can be predicted based on river stages and the warning given depending on the source of the flood waters. On the Sacramento River system, depending on which dams are releasing the flows, advance warning of river stages may be as much as 24 hours.

Due to the low-lying tidal nature of the delta and low elevation of the City of Isleton (just above 5 feet), the entire community must be considered to be in a floodplain. Flood conditions in the City of Isleton are influenced by Pacific Ocean tides and strong onshore winds, as well as high outflow from streams originating in the foothills or higher areas of the Sierra Nevada. Specifically, the City of Isleton may flood when the levees protecting Andrus, Brannan and Twitchell Islands, are either overtopped or fail, as a result of the separate or coincidental occurrence of higher high tides and high outflow through the delta. The waterways surrounding the islands are the Mokelumne, Sacramento and San Joaquin Rivers, and

Georgiana, Sevenmile and Threemile Sloughs. The levees within the City of Isleton are maintained by the levee district.

Values at Risk

GIS was used to determine the possible impacts of levee failure flooding within the City of Isleton. The methodology described in Section 4.3.12 of the Base Plan was followed in determining structures and values at risk to a levee failure. **Error! Reference source not found.** shows the property use, improved parcel count, improved values, estimated contents, total values and estimated loss of parcels that fall in a X Protected by Levee Flood Zone in the City. It should be noted that there are levees that protect the City, but these levees have not been accredited by FEMA as providing 100-year levels of flood protection.

Population at Risk

The DFIRM flood zones were overlayed on the parcel layer. Those residential parcel centroids that intersect the X Protected by Levee Zone was counted and multiplied by the 2010 Census Bureau average household factors for Isleton. According to this analysis, there is a total population of 0 residents of the City in an X Protected by Levee zone. This number reflects the decertification of the levees in the area.

Critical Facilities at Risk

An analysis was performed on the critical facility inventory in Isleton in identified FEMA DFIRMs. GIS was used to determine whether the facility locations intersects a DFIRM X Protected by Levee area. Due to levee decertification, there are no critical facilities in X Protected by Levee Areas. Details of critical facility definition, type, name and address and jurisdiction by flood zone are listed in Appendix E.

Natural Resources at Risk

There are no natural resources at risk.

Historic and Cultural Resources at Risk

There are no historic and cultural resources at risk.

Future Development

Until the levees are recertified, no development will happen in X Protected by Levee zones, as these zones will not exist until the levees are recertified.

Severe Weather: Extreme Temperatures – Heat

Likelihood of Future Occurrence–Highly Likely

Vulnerability–Medium

Hazard Profile and Problem Description

According to information provided by FEMA, extreme heat is defined as temperatures that hover 10 degrees or more above the average high temperature for the region and last for several weeks. Heat kills by taxing the human body beyond its abilities. Heat emergencies are often slower to develop, taking several days of continuous, oppressive heat before a significant or quantifiable impact is seen. Heat waves do not strike victims immediately, but rather their cumulative effects slowly take the lives of vulnerable populations. Heat waves do not cause damage or elicit the immediate response of floods, fires, earthquakes, or other more “typical” disaster scenarios. While heat waves are obviously less dramatic, they are potentially more deadly. According to the 2013 California State Hazard Mitigation Plan, the worst single heat wave event in California occurred in Southern California in 1955, when an eight-day heat wave resulted in 946 deaths.

Past Occurrences

Past occurrences of extreme heat were shown in Section 4.2.3 of the Base Plan. Those instances affected the whole County, including Isleton.

Vulnerability to Heavy Rains and Storms

Extreme heat happens in Sacramento County each year. Limited data on temperature extreme impacts per County was available during the development of this hazard’s profile. Extreme heat normally does not impact structures as there may be a limited number of days where the temperatures stay high which gives the structure periodic relief between hot and cool temperature cycles. Areas prone to excessively high temperatures are identified normally on a nation-wide assessment scale, which doesn’t allow detailed results on specific structures.

Critical Facilities at Risk

Extreme heat does not often affect structures, so no critical facilities are considered to be at risk to extreme heat.

Future Development

As the City shifts in demographics, more residents will become senior citizens. The residents of nursing homes and elder care facilities are especially vulnerable to extreme temperature events. It is encouraged that such facilities have emergency plans or backup power to address power failure during times of extreme heat.

Severe Weather: Fog

Likelihood of Future Occurrence–Highly Likely

Vulnerability–Medium

Hazard Profile and Problem Description

The Sacramento Valley can produce some extremely dangerous fogs in the winter and early spring months. These are a type of radiation fog called “tule fog.” Tule fog forms on cold and clear nights, when the ground is moist and there is very little wind. Under such conditions the ground cools quickly and thus cools the air above it as well. The moisture in this cooled air condenses and can create extremely dense fog. Since the air may be stagnant and there is little evaporative effect from the sun in winter months, tule fogs can last for several days and, in some instances, over a week. Under these conditions, visibility is often reduced to 600 feet, but can drop to less than 10 feet.

Past Occurrences

Since tule fog often covers large areas of the County, past occurrences of fog in the City are considered to be the same as the past occurrences of fog for the County listed in Section 4.2.4 of the Base Plan.

Vulnerability to Fog

When tule fog forms, a severe risk is posed to traffic with the potential for multi-car pileups, especially on highways such as Highway 160. This may have an economic impact on the City due to delays in transportation times or even the shutting-down of the highway. This poses a problem during emergencies where residents with medical issues have difficulty leaving the City. The same dense and lingering fog can also produce adverse health effects in those with respiratory ailments.

Critical Facilities at Risk

Fog does not often affect structures, so no critical facilities are considered to be at risk to fog.

Future Development

Fog is unlikely to affect future development in the City of Isleton.

Severe Weather: Heavy Rain and Storms

Likelihood of Future Occurrence–Highly Likely

Vulnerability–Medium

Hazard Profile and Problem Description

According to historical hazard data, severe weather is an annual occurrence in the City. Damage related to severe weather has occurred and will continue to occur in the future. Heavy rain and thunderstorms are the most frequent type of severe weather occurrence in the City. Wind and lightning often accompany these storms and have caused damage in the past.

Past Occurrences

Every year the City experiences a few storms that rolls through causing localized flooding by overwhelming the City of Isleton's storm water runoff system. Also during heavy storms, the City's wastewater treatment plants inflows triple due to infiltration.

Vulnerability to Heavy Rains and Storms

The vulnerability is high due to the outdated and aging stormwater runoff system. The stormwater drainage was put in many years ago. In the years since, the City has covered more land with impermeable surfaces such as asphalt and concrete. During heavy rain the storm water drainage system gets overwhelmed very quickly. With the City's new development and infiltration increases during heavy storms there is a possibility of overwhelming the City's wastewater facility.

Problems associated with the primary effects of severe weather include flooding, pavement deterioration, washouts, high water crossings, landslide/mudslides, debris flows, and downed trees. Table 1-17 presented above provides details of those areas within the City that are most often affected during these heavy storm events and have localized flooding issues.

Critical Facilities at Risk

The City of Isleton's Wastewater Treatment Plant, and City Hall are at risk. All of the City's operations are based out of these buildings. These storms also cause increases of infiltration that triples the inflow to the wastewater treatment plant. With the new development, Village on the Delta, these storms could cause amounts of water to be treated to exceed the amount of daily flow the wastewater plant can handle.

Future Development

The City enforces the state building code and other ordinances, which regulate construction techniques that minimize damage from heavy storms and rain. Future development in the City is subject to these building codes. New critical facilities such as communications towers should be built to withstand hail damage, lightning, and heavy rains.

Wildfire

Likelihood of Future Occurrence—Unlikely

Vulnerability—Low

Hazard Profile and Problem Description

Although a low risk hazard, due to its significance in the County and the State of California, wildfire is profiled here.

Past Occurrences

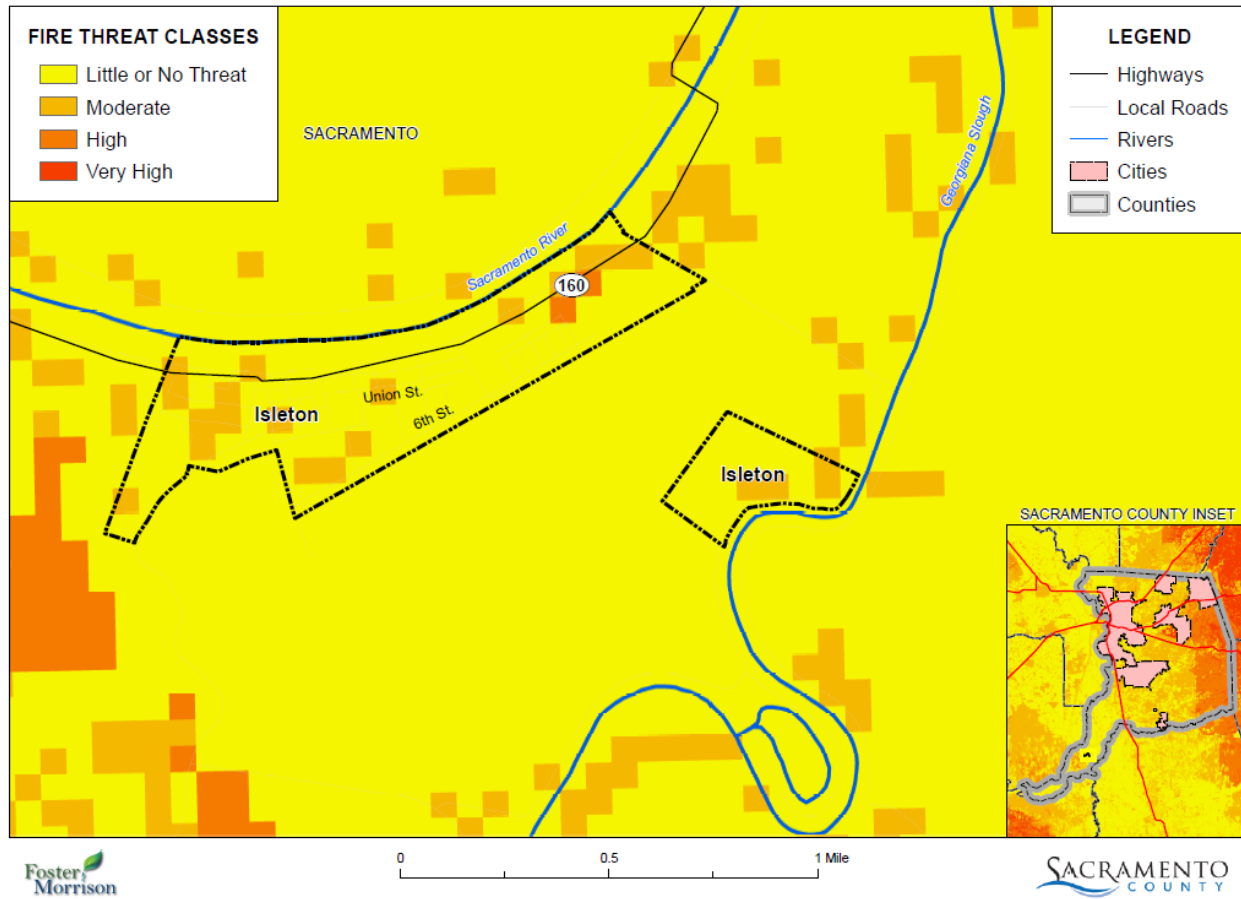
There have been no past occurrences of wildfire in the City.

Vulnerability to Wildfire

Values at Risk

Following the methodology described in Section 4.3.2 Vulnerability of Sacramento County to specific hazards, a wildfire map for the City of Isleton was created (see Figure 1-7). Wildfire threat within the City ranges from low to high.

Figure 1-7 City of Isleton’s Fire Severity Zones



Data Source: Sacramento County GIS, Cal-Atlas, Cal-Fire 2004 Fire Threat Data; Map Date: 05/2016.

Assets at Risk

Analysis results for Isleton are shown in Table 1-18, which summarizes total parcel counts, improved parcel counts and their structure values by occupancy type of parcels affected by fire.

Table 1-18 City of Isleton – Count and Value of Parcels by Property Use and Fire Threat Zone

Property Use	Total Parcel Count	Total Land Value	Improved Parcel Count	Improved Structure Value	Total Value
Little or No Threat					

Property Use	Total Parcel Count	Total Land Value	Improved Parcel Count	Improved Structure Value	Total Value
Agricultural	1	\$10,642	0	\$0	\$10,642
Church / Welfare	6	\$117,506	6	\$662,538	\$780,044
Industrial	8	\$648,069	7	\$872,264	\$1,520,333
Miscellaneous	11	\$363	0	\$0	\$363
Office	5	\$375,240	4	\$592,391	\$967,631
Public / Utilities	31	\$832,422	1	\$30,000	\$862,422
Residential	174	\$6,151,691	171	\$14,431,650	\$20,583,341
Retail / Commercial	55	\$1,861,475	53	\$5,644,870	\$7,506,345
Vacant	121	\$2,693,917	6	\$32,963	\$2,726,880
Total	412	\$12,691,325	248	\$22,266,676	\$34,958,001
Moderate					
Church / Welfare	2	\$8,918	2	\$62,787	\$71,705
Miscellaneous	3	\$8,054	0	\$0	\$8,054
Public / Utilities	4	\$0	0	\$0	\$0
Residential	77	\$2,613,587	76	\$5,958,859	\$8,572,446
Retail / Commercial	8	\$231,528	8	\$264,382	\$495,910
Vacant	17	\$1,109,886	0	\$0	\$1,109,886
Total	111	\$3,971,973	86	\$6,286,028	\$10,258,001
High					
Vacant	2	\$210,043	0	\$0	\$210,043
High Total	2	\$210,043	0	\$0	\$210,043
Grand Total					
Grand Total	525	\$16,873,341	334	\$28,552,704	\$45,426,045

Source: Sacramento County 2016 Parcel/2015 Assessor's Data, CAL FIRE

*Land and structure values

Population at Risk

The Fire Threat Zone dataset was overlaid on the parcel layer. Those residential parcel centroids that intersect the fire threat zones were counted and multiplied by the 2010 Census Bureau average household factors for the City. According to this analysis, there is a total population of 185 residents of Isleton at risk to moderate or higher wildfire risk. This is shown in Table 1-19.

Table 1-19 City of Isleton – Count of Improved Residential Parcels and Population by Fire Threat Zone

Fire Severity Zone	Improved Residential Parcels	Population*
Little or No Threat	171	415
Moderate	76	185
High	0	0
Very High	0	0
Total	247	600

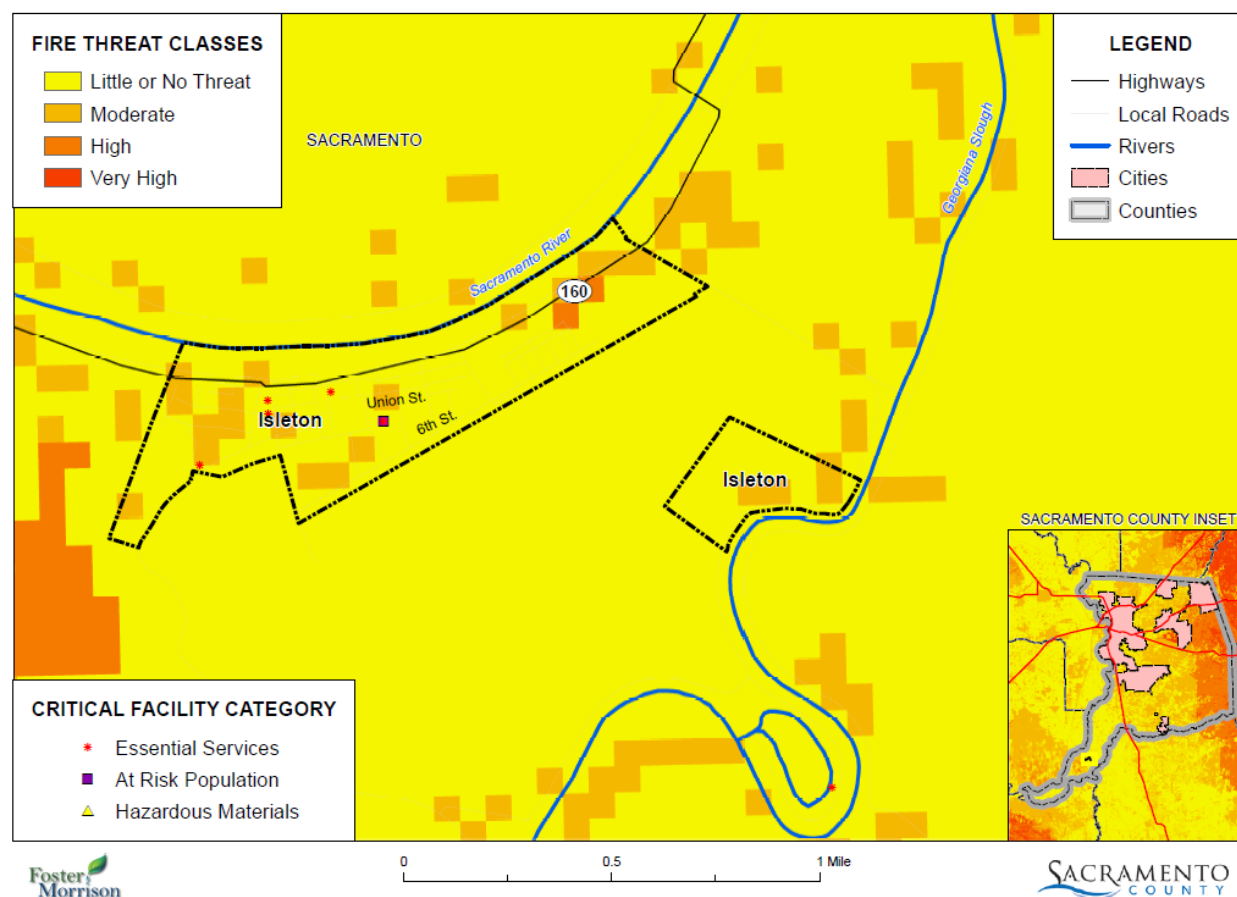
Source: Sacramento County 2015 Parcel/Assessor’s Data, CAL FIRE

* Average household populations for Isleton (2.43) from the 2010 US Census were used

Critical Facilities at Risk

Wildfire analysis was performed on the critical facility inventory in Sacramento County and all jurisdictions. GIS was used to determine whether the facility locations intersect a fire threat zone provided by CAL FIRE, and if so, which zone it intersects. There is one facility in the moderate or higher fire threat zone in the City. This is shown in Figure 1-8 and detailed in Table 1-20. Details of critical facility definition, type, name and address and jurisdiction by fire threat zone are listed in Appendix E.

Figure 1-8 City of Isleton – Critical Facilities in the Fire Threat Zone



Data Source: Sacramento County GIS, Cal-Atlas, Cal-Fire 2004 Fire Threat Data; Map Date: 05/2016.

Table 1-20 City of Isleton – Critical Facilities in the Fire Threat Zones

Fire Threat Zone	Critical Facility Definition	Facility Count
Little or No Threat	Essential Services Facilities	4
	At Risk Population Facilities	1
	Hazardous Materials Facilities	0
	Total	5
Moderate	Essential Services Facilities	1
	At Risk Population Facilities	0
	Hazardous Materials Facilities	0
	Total	1
High	Essential Services Facilities	0
	At Risk Population Facilities	0

Fire Threat Zone	Critical Facility Definition	Facility Count
	Hazardous Materials Facilities	0
	Total	0
Very High	Essential Services Facilities	0
	At Risk Population Facilities	0
	Hazardous Materials Facilities	0
	Total	0
Grand Total		166

Source: CAL FIRE, Sacramento County GIS

Natural Resources at Risk

Depending on the nature and extent of any wildfire, natural resources in the area are potentially at risk.

Historic and Cultural Resources at Risk

Depending on the nature and extent of any wildfire, any historic and cultural resources in the area are potentially at risk.

Future Development

Population growth and development in the City has been relatively minor and is predicted to remain so in the future. Additional growth and development within the moderate or higher fire threat areas of the City would place additional assets at risk to wildfire.

1.6 Capability Assessment

Capabilities are the programs and policies currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. This capabilities assessment is divided into five sections: regulatory mitigation capabilities, administrative and technical mitigation capabilities, fiscal mitigation capabilities, mitigation education, outreach, and partnerships, and other mitigation efforts.

1.6.1 Regulatory Mitigation Capabilities

Table 1-21 lists regulatory mitigation capabilities, including planning and land management tools, typically used by local jurisdictions to implement hazard mitigation activities and indicates those that are in place in the City of Isleton.

Table 1-21 City of Isleton’s Regulatory Mitigation Capabilities

Plans	Y/N Year	Does the plan/program address hazards? Does the plan identify projects to include in the mitigation strategy? Can the plan be used to implement mitigation actions?
Comprehensive/Master Plan	Y 2000	Yes it address hazards and mitigation measures to address such hazards. Yes it may be implemented
Capital Improvements Plan	Y In process	The capital improvement plan is in development
Economic Development Plan	Y In Process	Yes to all aspects of the questions above
Local Emergency Operations Plan	Yes	The City of Isleton follows the State of California’s Plan
Continuity of Operations Plan	No	
Transportation Plan	Yes	Only identifies mitigation strategy and actions
Stormwater Management Plan/Program	Y In Process	It will address all aspects of above requirements
Engineering Studies for Streams	N	No streams inside city limits
Community Wildfire Protection Plan	No	City’s fire dept doesn’t cover any SRA or wildland coverage
Other special plans (e.g., brownfields redevelopment, disaster recovery, coastal zone management, climate change adaptation)		
Building Code, Permitting, and Inspections	Y/N	Are codes adequately enforced?
Building Code	Y	Version/Year: 2015 IBC
Building Code Effectiveness Grading Schedule (BCEGS) Score	N	Score:
Fire department ISO rating:	Y	Rating: 5/9 (urban/rural)
Site plan review requirements	Y	Through the building official.
Land Use Planning and Ordinances	Y/N	Is the ordinance an effective measure for reducing hazard impacts? Is the ordinance adequately administered and enforced?
Zoning ordinance	Y	Yes through the planning commission and building official
Subdivision ordinance	Y	
Floodplain ordinance	Y	Yes through the building dept
Natural hazard specific ordinance (stormwater, steep slope, wildfire)	Y	Yes through the building dept
Flood insurance rate maps	Y	Yes
Elevation Certificates	Y	Yes
Acquisition of land for open space and public recreation uses	Y	Yes through the planning commission

Erosion or sediment control program	N
Other	
How can these capabilities be expanded and improved to reduce risk?	
With education incentives for employees and furthering education we can make sure that we improve in all aspects concerning the above departments. The planning commission is now fully appointed; they have started working with staff to improve in these fields.	

Source: City of Isleton

City of Isleton General Plan (2000)

Under the body of statutory and case law which has evolved in California, including Guidelines issued by the State Office of Planning and Research, the General Plan for Isleton functions as a "constitution" in much the same way as a state or national constitution. The Plan reflects the City's long-range aspirations of physical form and amenity and provides guidance to the substance of development regulations such as zoning and subdivision ordinances, and to other programs approved by the City, such as the Redevelopment Program, which combine as the package of tools necessary to carry out the General Plan over time.

Mitigation related goals and policies from the General Plan are:

- Inventory all buildings which are unsound under conditions of "moderate" seismic activity; buildings having questionable structural resistance should be considered for either rehabilitation or demolition. Structures determined by the City's Building Official to be structurally unsound are to be reported to the owner and recorded with the County Recorder to ensure that future owners are made aware of hazardous conditions and risks.
- All new building construction shall conform to the latest seismic requirements of the Uniform Building Code as a minimum standard. A building height limit of 50 feet shall be maintained, with a maximum of four stories.
- Soil compaction tests, and geotechnical analysis of soil conditions and behavior under seismic conditions shall be required of all subdivisions and of all commercial, industrial and institutional structures over 6,000 square feet in area (or in the case of institutional structures, those which hold 100 or more people).
- The City should adopt an Earthquake Disaster Plan in coordination with Sacramento County and local special districts (school, levee maintenance, reclamation and irrigation). The Plan should identify hazards that may occur as the result of an earthquake of major magnitude, and should designate evacuation routes and means to coordinate all local government agencies in assisting local residents in the event of a major earthquake, fire or explosion, or hazardous chemical spill or release of hazardous air-borne gas.
- All lines which are part of the domestic water distribution system should be looped to assure adequate pressure in the event of major fire, earthquake, or explosion. Emergency standby power generation capability should be available at all water wells to assure water availability in the event of a major power failure.
- The City will continue to give high priority to the support of police protection, and to fire suppression and prevention functions of the Isleton Fire Department.
- The City will work to maintain a fire flow standard of 3,000 gpm for all commercial and industrial areas of the community, and 1,000 gpm for residential areas, to assure the capability to suppress urban fires.
- The City will maintain a street system which is capable of providing access to any fires that may develop within the urban area, and which is capable of providing for the adequate evacuation of residents in the event of an emergency condition of magnitude.

- In the event that any part of the levee system protecting Isleton was to fail, the most expedient evacuation routes would be east and north along the Sacramento River levee roads toward Walnut Grove, and then east toward Interstate 5.

City of Isleton Municipal Codes and Policies

The City has many Municipal Codes and policies related to mitigation. These codes and policies can be primarily or secondarily focused on mitigation.

- Zoning Ordinance (Title 12)
- Subdivision Ordinance (Title 11)
- Flood Damage Prevention Ordinance (Title 5, Chapter 5.52)
- Building and Construction Ordinances (Title 10)

1.6.2. Administrative/Technical Mitigation Capabilities

Isleton is governed by a Strong City-Manager form of government. There are 4 council members elected at large who serve 2 year terms. The Mayor is the 5th member of the governing body and also serves for a 2-year term. The Mayor presides at all Council meetings and retains the power of veto, however, the Mayor votes only to break ties. The Isleton Planning and Zoning Committee consist of five members. Their purpose is to regulate land use; play an advisory role for plan approval; and be an advisory board to the City Council. Table 1-22 identifies the City department(s) responsible for activities related to mitigation and loss prevention in Isleton.

Table 1-22 City of Isleton’s Administrative and Technical Mitigation Capabilities

Administration	Y/N	Describe capability Is coordination effective?
Planning Commission	Y	Effective
Mitigation Planning Committee	N	
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems)	Y	Effective, through measure A funds and HUT funds work is done to reduce these risks
Mutual aid agreements	N	
Other		
		Is staffing adequate to enforce regulations? Is staff trained on hazards and mitigation? Is coordination between agencies and staff effective?
Staff	Y/N FT/PT	
Chief Building Official	PT	Yes
Floodplain Administrator	N	
Emergency Manager	N	
Community Planner	N	
Civil Engineer	Y/PT	Yes
GIS Coordinator	Y/PT	
Other	N	

Technical	
Warning systems/services (Reverse 911, outdoor warning signals)	N
Hazard data and information	Y
Grant writing	N
Hazus analysis	N
Other	
How can these capabilities be expanded and improved to reduce risk?	
With new people filling these positions we will ensure that we do everything possible within budgetary means to reduce all risks posed to the public within our jurisdiction. By working in conjunction with county services we can expand our capabilities to provide the best coverage.	

Source: City of Isleton

1.6.3. Fiscal Mitigation Capabilities

Table 1-23 identifies financial tools or resources that the City could potentially use to help fund mitigation activities.

Table 1-23 City of Isleton’s Fiscal Mitigation Capabilities

Funding Resource	Access/ Eligibility (Y/N)	Has the funding resource been used in past and for what type of activities? Could the resource be used to fund future mitigation actions?
Capital improvements project funding	Y	Measure A and HUT funds are used on a regular basis to mitigate all hazards posed to the City of Isleton
Authority to levy taxes for specific purposes	Y	Yes a special tax was just passed 2015 to buy new equipment for the fire dept. Yes
Fees for water, sewer, gas, or electric services	Y	Sewer income is used to mitigate hazards and can be used to fund future actions but is not adequate to cover all costs.
Impact fees for new development	Y	Very little impact fees are paid to the city due to limited building being done inside city limits
Storm water utility fee	N	
Incur debt through general obligation bonds and/or special tax bonds	Y	General Bonds were used to improve the sewer system. Due to the high costs and low revenue
Incur debt through private activities	N	
Community Development Block Grant	Y	No possibly could be used for mitigation actions
Other federal funding programs	Y	Depends on what funding was dispersed
State funding programs	Y	Depends on what funding was dispersed
Other		

Source: City of Isleton

1.6.4. Mitigation Education, Outreach, and Partnerships

Table 1-24 identifies education and outreach programs and methods already in place that could be/or are used to implement mitigation activities and communicate hazard-related information. More information can be found below the table.

Table 1-24 City of Isleton’s Mitigation Education, Outreach, and Partnerships

Program/Organization	Yes/No	Describe program/organization and how relates to disaster resilience and mitigation. Could the program/organization help implement future mitigation activities?
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	N	
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Y	This is handled through Cal_Am water and the cities fire dept. Yes could be possibly used to mitigate activities
Natural disaster or safety related school programs	Y	River Delta Unified School District
StormReady certification	N	
Firewise Communities certification	N	
Public-private partnership initiatives addressing disaster-related issues	N	
Other		

1.6.5. Other Mitigation Efforts

The City has performed numerous mitigation projects citywide. One is the change out of old storm water grates that were causing localized flooding during heavy rain due to foliage clogging them. The City has also taken steps yearly to bring a vac truck to clean out the catch basins in the storm water drainage inlets to keep them from clogging the drainage pipes. The City has also taken steps to remove the brush from all stormwater drainage ditches that lead to the reclamation ditch in an effort to keep the flow unobstructed. Isleton has a leaf and branch collection program to prevent the clogging of drains.

1.7 Mitigation Strategy

1.7.1. Mitigation Goals and Objectives

The City of Isleton adopts the hazard mitigation goals and objectives developed by the HMPC and described in Chapter 5 Mitigation Strategy.

1.7.2. NFIP Mitigation Strategy

As a participant of the National Flood Insurance Program (NFIP), the City of Isleton has administered floodplain management regulations that meet the minimum requirements of the NFIP. The management program objective is to protect people and property within the City. The City of Isleton will continue to comply with the requirements of the NFIP in the future.

The City’s regulatory activities apply to existing and new development areas of the City; implementing flood protection measures for existing structures and maintaining drainage systems. The goal of the program is to enhance public safety, and reduce impacts and losses while protecting the environment.

The City of Isleton General Services Department provides public outreach activities which include map information services, public awareness, public hazard disclosure, and flood protection information. This information is readily available to the public and consists of current and accurate flood mapping. In addition, the General Services Department provides information about our stormwater management program and up-to-date information related to the maintenance of our drainage system.

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 goals of the CRS which are to reduce flood losses, facilitate accurate insurance rating, and promote the awareness of flood insurance. The City of Isleton is currently evaluating joining the CRS.

More information about the floodplain administration in the City of Isleton can be found in Table 1-25.

Table 1-25 City of Isleton Compliance with NFIP

NFIP Topic	Comments
Insurance Summary	
How many NFIP policies are in the community? What is the total premium and coverage?	124 \$220,188 \$23,489,3000
How many claims have been paid in the community? What is the total amount of paid claims? How many of the claims were for substantial damage?	13 \$457,108.20 6
How many structures are exposed to flood risk within the community?	325
Describe any areas of flood risk with limited NFIP policy coverage	
Staff Resources	
Is the Community Floodplain Administrator or NFIP Coordinator certified?	No
Provide an explanation of NFIP administration services (e.g., permit review, GIS, education or outreach, inspections, engineering capability)	Due to budgetary shortfalls, there is no staff for NFIP coordination.
What are the barriers to running an effective NFIP program in the community, if any?	Budgets for staff.
Compliance History	

NFIP Topic	Comments
Is the community in good standing with the NFIP?	Yes
Are there any outstanding compliance issues (i.e., current violations)?	No
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	5/13/2010
Is a CAV or CAC scheduled or needed?	
Regulation	
When did the community enter the NFIP?	December 1, 1978
Are the FIRMs digital or paper?	Digital
Do floodplain development regulations meet or exceed FEMA or State minimum requirements? If so, in what ways?	The cities standards meet FEMA and state standards by applying all regulations in the permitting process.
Provide an explanation of the permitting process.	
Community Rating System	
Does the community participate in CRS?	No
What is the community's CRS Class Ranking?	N/A
What categories and activities provide CRS points and how can the class be improved?	N/A
Does the plan include CRS planning requirements?	N/A

1.7.3. Mitigation Actions

The planning team for the City of Isleton identified and prioritized the following mitigation actions based on the risk assessment. Background information and information on how each action will be implemented and administered, such as ideas for implementation, responsible office, potential funding, estimated cost, and timeline are also included.

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

Hazards Addressed: All hazards

Goals Addressed: 1, 2, 3, 4

Issue/Background: Local jurisdictional reimbursement for mitigation projects and cost recovery after a disaster is guided by Government Code Section 8685.9 (AB 2140). Specifically, this section requires that each jurisdiction adopt a local hazard mitigation plan (LHMP) in accordance with the federal Disaster Mitigation Act of 2000 as part of the Safety Element of its General Plan. Adoption of the LHMP into the Safety Element of the General Plan may be by reference or incorporation.

Other Alternatives: No action

Existing Planning Mechanisms through which Action will be Implemented: Safety Element of General Plan

Responsible Office: City of Isleton Planning Department

Priority (H, M, L): High

Cost Estimate: Jurisdictional board/staff time

Potential Funding: Local budgets

Benefits (avoided Losses): Incorporation of an adopted LHMP into the Safety Element of the General Plan will help jurisdictions maximize the cost recovery potential following a disaster.

Schedule: As soon as possible

Action 2. Storm Water Runoff Rehabilitation Project

Hazards Addressed: Localized Storm water flooding due to inadequate drainage on aging storm water drainage system

Goals Addressed: 1, 2, 3, 4

Issue/Background: City of Isleton has several locations where the storm water causes ponding in the streets and along hwy 160. The drainage system we have drains on one side of the street and bubbles up across the street and drains down the gutter. These gutters get overwhelmed which causes debris from yards and streets to clog up downstream drains.

Project Description: To change the flow of the storm water from running down gutters along the street to creating drains that take the flow under the streets to the reclamation ditch.

Other Alternatives: No action

Existing Planning Mechanism(s) through which Action Will Be Implemented: Stormwater program

Responsible Office/Partners: City of Isleton Department of Public Works

Project Priority: High priority

Cost Estimate: To be determined

Benefits (Losses Avoided): The potential of car accidents due to heavy storm water ponding. The potential of flooding homes due to nowhere for the storm water to go.

Potential Funding: FEMA grants, Measure “A”, or other grants

Timeline: As soon as funding is available

Action 3. Wastewater Treatment Plant Pond Levee Elevation Raise to 200-year Flood Standard

Hazards Addressed: The possible spillover of wastewater from the sewer ponds due to levee elevation under 200-year flood standard

Goals Addressed: 1, 2, 3, 4

Issue/Background: There is a possibility that if the City has a 200-year flood event that the levees around the wastewater treatment plant ponds will not be sufficient, due to the fact they were made to protect against a 100-year flood.

Project Description: Levee elevation increase around wastewater treatment plant ponds

Other Alternatives: None

Existing Planning Mechanism(s) through which Action Will Be Implemented: Capital Improvement Projects for the City of Isleton Wastewater treatment plant

Responsible Office/Partners: City of Isleton Department of Public Works

Project Priority: High Priority

Cost Estimate: To be determined

Benefits (Losses Avoided): The benefit would be that if a flood happened there would be adequate protection to keep wastewater from contaminating drinking water and the public's health and safety

Potential Funding: FEMA grants, other grants, and impact fees from new homes built within the City of Isleton

Timeline: 0-1 years