



This document is a support annex to the
Yolo County Multijurisdictional Hazard
Mitigation Plan

Yolo County Unincorporated Area Community Profile



Version 1.0

December 2018



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ACKNOWLEDGEMENTS

Yolo County would like to thank those Yolo County Operational Area collaborators and partners who participated in the planning and development of this document.

The official Yolo County Operational Area Hazard Mitigation Steering Committee provided the oversight and dedication to this project that was required and without their commitment; this project would not be possible.

As with any working plan, this document represents planning strategies and guidance as understood as of the date of this plan's release. This plan identifies natural hazards and risks and identifies the hazard mitigation strategy to reduce vulnerability and make the unincorporated areas of Yolo County more disaster resistant and sustainable.

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LETTER OF PROMULGATION

December 2018

To: Officials and Employees of the County of Yolo

The preservation of life and property is an inherent responsibility of county government. As disasters occur in devastating form at any time, the County of Yolo must provide safeguards which will save lives and minimize property damage through mitigation planning and training. Sound mitigation planning carried out by knowledgeable and well-trained personnel can and will minimize losses.

The Yolo County Operational Area Multi-Jurisdictional Hazard Mitigation Plan (HMP) identifies the hazard risks and vulnerabilities for the Yolo County Operational Area and identifies mitigation projects and actions to help reduce those risks. It provides for the integration and coordination of planning efforts of multiple jurisdictions within Yolo County as well as the Yocha Dehe Wintun Nation and the Housing Authority of Yolo County.

This County of Yolo Community Profile is an extension of the HMP. The content is based upon guidance approved and provided by the Federal Emergency Management Agency and the California Governor's Office of Emergency Services. The intent is to provide direction for the City of Davis on how to mitigate against the threat of disaster through effective mitigation strategies and initiatives.

Once adopted, the HMP and Community Profile will be reviewed and tested periodically and revised as necessary to meet changing conditions and requirements.

The County of Yolo Board of Supervisors gives its full support to this Community Profile and urges all employees and individuals to mitigate against the threat of disaster before they occur.

Chair, Board of Supervisors

County of Yolo

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SECTION 1.0: INTRODUCTION

The Yolo County Community Profile has been prepared in conjunction with the Yolo County Operational Area Hazard Multi-Jurisdictional Mitigation Plan (HMP), establishing an inter-jurisdictional process for the development and implementation of effective hazard mitigation strategies in association with identified hazards that pose real or potential threats to the unincorporated areas of Yolo County.

1.1 HISTORY

Yolo County was one of the original 27 counties created when California became a state in 1850. "Yolo" is derived from the native Poewin Indian word "yo-lo-y" meaning "abounding in the rushes". Other historians believe it to be the name of the Indian chief, Yodo, or the Indian village of Yodoi.

The first recorded contact with Westerners occurred in the late 1820s. These included Spanish missionaries as well as trappers and hunters who could be found along the banks of "Cache Creek" - named by French-Canadian trappers. The first white settler was William Gordon who received a land grant from the Mexican government in 1842 and began planting wheat and other crops.

The towns of Yolo County were outgrowths of native villages along waterways. The county's first town, Fremont, was founded in 1849 along the confluence of the Sacramento and Feather Rivers and became the first county seat. Knights Landing, Washington, Cacheville (later called Yolo), Clarksburg, Winters, Esparto, Capay, Guinda, and Davisville (Davis) were all built near waterways. Davisville had the added advantage of being on the path of the newly constructed railroad. Woodland, which became the county seat in 1862, began in a wooded area of valley oaks and was also served by a nearby railroad.

In 1906, to further emphasize agriculture's role in Yolo County, the University of California chose a 780-acre farm belonging to Jerome Davis for establishment of a university farm to serve as part of the College of Agriculture. The Davis farm has since become a separate campus of the University and has received world-wide fame for its research and educational work.

In 1987, West Sacramento became Yolo County's fourth incorporated city. It is home to the Port of West Sacramento and Sacramento Deep Water Channel, providing worldwide access to Yolo County's agricultural and manufacturing production.

1.2 OVERVIEW

Agriculture is Yolo County's primary industry. The eastern two-thirds of the County consists of nearly level alluvial fans, flat plains, and basins, while the western third is largely composed of rolling terraces and steep uplands used for dry-farmed grain and range. The elevation ranges from slightly below sea level near the Sacramento River around Clarksburg to 3,000 feet along the ridge of the western mountains.

Yolo County's 653,549 acres is home to over 214,555 people as of January 2016. Nearly 88% of the population lives in the County's four cities (Davis, West Sacramento, Woodland, and Winters). Yolo County's proximity to Sacramento International Airport as well as two major interstate highways places it within a significant transportation hub of the state. See Figure 1 for a map of Yolo County.

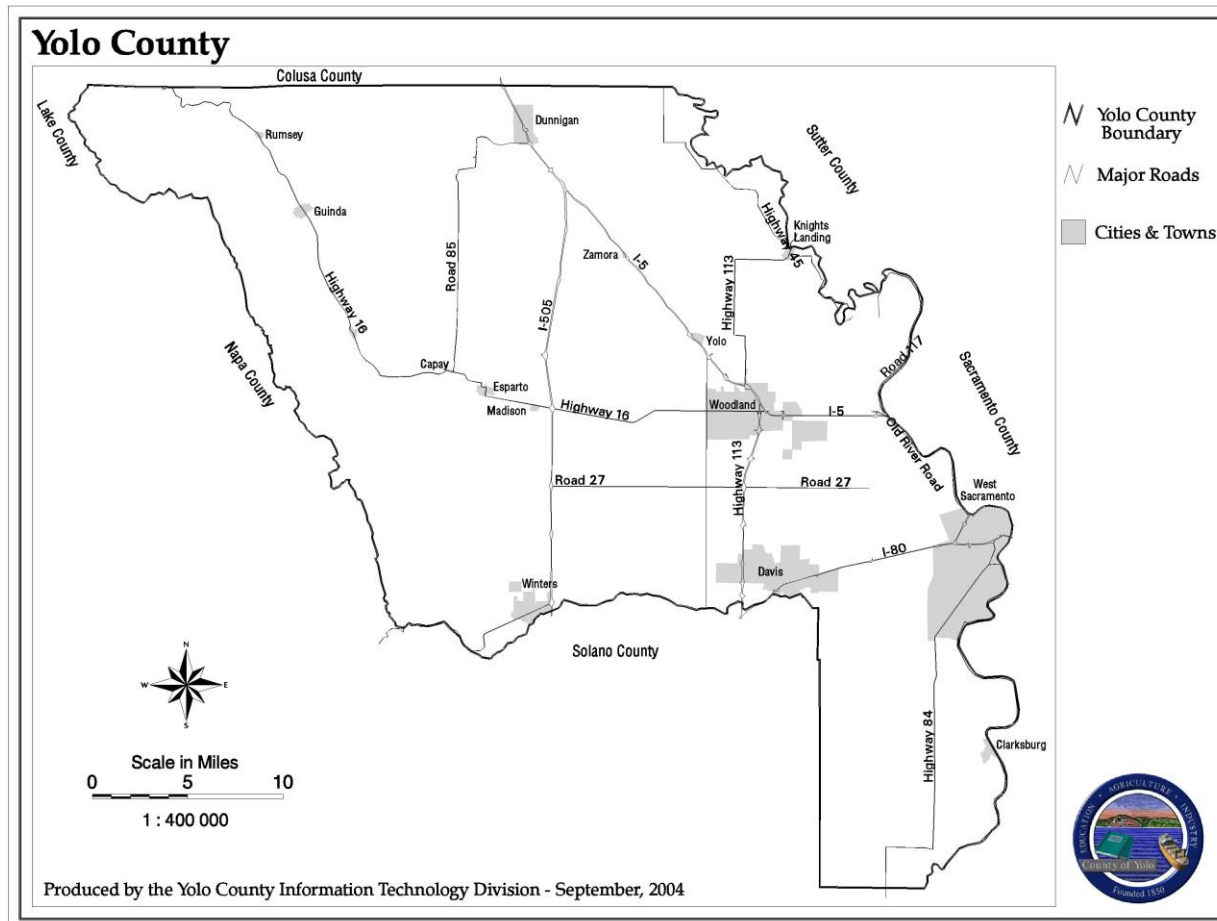


Figure 1: Map of Yolo County

County departments are responsible for providing a wide array of services to the unincorporated areas of Yolo County, as well as within municipalities. Departments are managed by elected officials or appointed directors who are responsible for administering local programs and services, in accordance with both applicable state law and county regulations. Many county departments are further sub-divided into divisions, offices, and programs, which provide specific services to the public. The following is a list of Yolo County departments:

- Agriculture
- Assessor/Clerk-Recorder/Elections
- Board of Supervisors
- Community Services
 - Environmental Health
 - Fleet Services
 - Integrated Waste Management
 - Planning
 - Public Works
- County Administrator
- County Counsel

- Child Support Services
- Department of Financial Services
- District Attorney
- General Services
 - Facilities
 - Information Technology
 - Parks
- Health & Human Services Agency
 - Community Health
 - Child, Youth & Family
 - Adult & Aging
 - Service Centers
- Human Resources
- Library
- Probation
- Public Defender
- Sheriff-Coroner

Special Districts

The following is a list of special districts in Yolo County.

- Knights Landing Ridge Drainage District
- Dunnigan Water District
- Esparto Community Service District
- Madison Community Service District
- Knights Landing Community Services District
- Cacheville Community Services District
- North Davis Meadows CSA
- Dunnigan County Service Area
- El Macero County Service Area
- Garcia Bend County Service Area
- North Davis Meadows County Service Area
- Wild Wings County Service Area
- Snowball County Service Area
- Willowbank County Service Area
- Colusa Basin Drainage District (also in Colusa County)
- Yolo County Flood Control & Water Conservation District
- Yolo County Resource Conservation District
- Yolo County Transportation District
- Reclamation Districts 108 (also in Colusa County), 150, 1600, 2035, 2068 (also in Solano County), 2093 (also in Solano County), 307, 537, 730, 765, 785, 787, 827, 999 (also in Sacramento County)
- Sacramento River Westside Levee District (also in Colusa County)
- Yolo County Fire Districts (see below)
- Yolo County School Districts (see Section 1.4.5)
- Yolo County Cemetery Districts

- Capay Cemetery
- Cottonwood Cemetery
- Davis Cemetery
- Knights Landing Cemetery
- Mary's Cemetery
- Winters Cemetery
- Solano Air Quality Management District (not in Yolo County)
- Napa-Solano-Yolo-Marin County Public Health Laboratory (not in Yolo County)
- Woodland-Davis Clean Water Agency
- Sacramento Regional County Sanitation District (also in Sacramento and Placer Counties)

Fire Districts

Figure 2 provides a map of the Yolo County Fire Protection Districts.

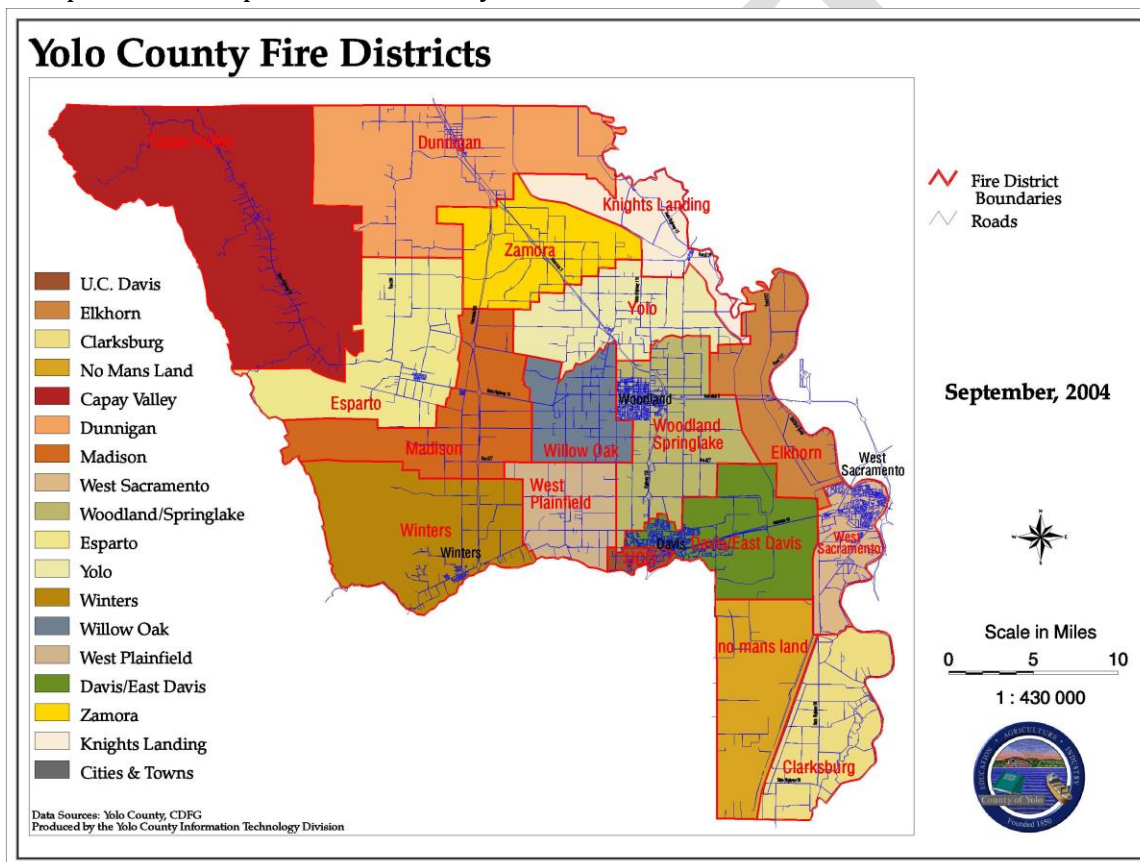


Figure 2: Yolo County Fire Protection Districts

Parks & Recreation

In addition to parks operated and maintained by the four cities, the County of Yolo also provides regional recreational sites at various locations:

- Cache Creek Canyon
- Camp Haswell
- Vernon A. Nichols Park
- Knights Landing Boat Launch

- Esparto Community Park
- Elkhorn Regional Park
- Putah Creek Fishing Access
- Grasslands Regional Park
- Clarksburg Boat Launch
- Gibson Historical Museum

1.3 DEMOGRAPHICS

The population of Unincorporated Yolo County is approximately 28,500 residents as of 2016. Yolo County has seen significant growth over the past decade. See Figure 3 for annual population growth rates for Yolo County compared to the rest of California from 2002 to 2016.

Annual population growth rates for California, Yolo County

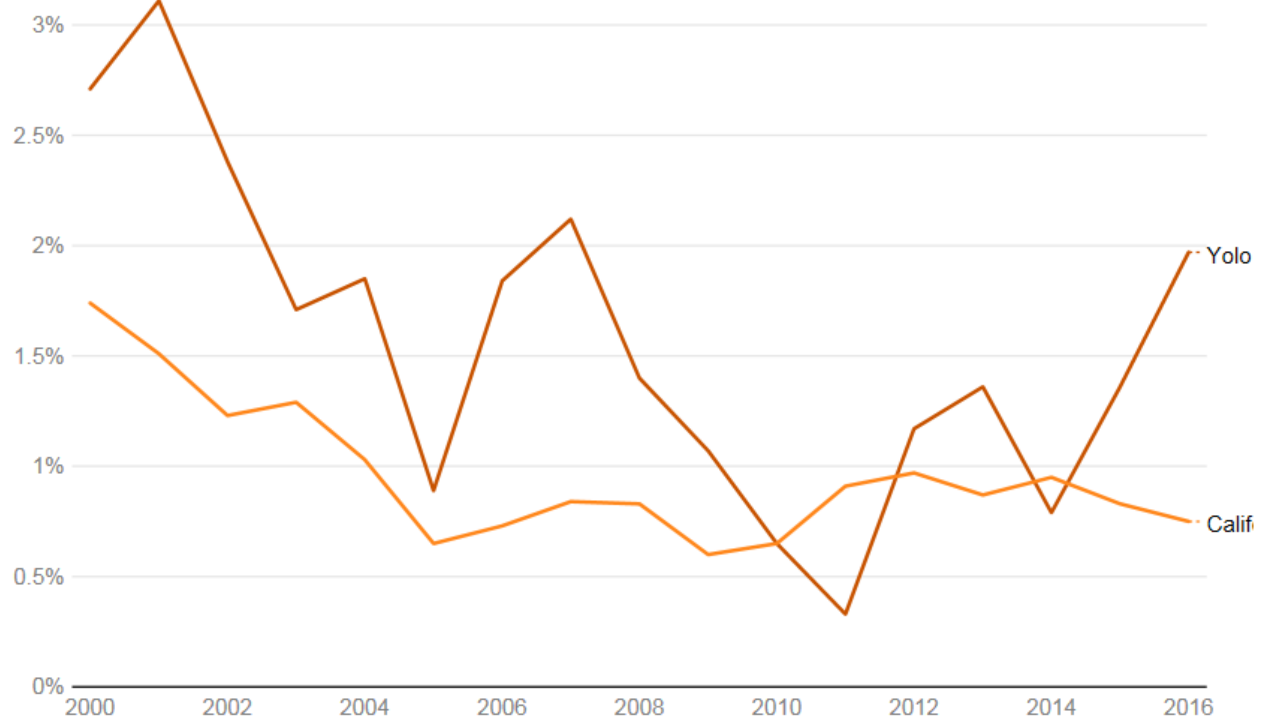


Figure 3: Annual Population Growth Rates for Yolo County 2000-2016

1.4 INFRASTRUCTURE

Yolo County is home to a vast array of infrastructure, serving as a primary rail and interstate transportation corridor for northern California. Union Pacific, Burlington Northern and Santa Fe, and Amtrak all operate through Yolo County. Several major pipelines also crisscross Yolo County, including the Kinder Morgan Pipeline and the Wickland Pipeline.

1.4.1 COMMUNICATIONS

The majority of Yolo County receives its landline telephone service through Verizon. Cellular phone service is provided by major national carriers including AT&T, Verizon, Sprint, Metro Unlimited and others. Cable service companies also provide broadband service within selected areas.

Yolo County is serviced by several commercial cable television providers, both within the incorporated municipalities as well as in selected unincorporated communities. Cable providers also offer broadband Internet connectivity to subscribers. Numerous commercial phone, cable, and information technology services provide broadband and wireless access to the Internet throughout Yolo County.

Yolo County is served by a host of television and radio broadcast services throughout Northern California. The primary broadcast market includes Sacramento, the San Francisco Bay Area, North Coast, Northern Sacramento Valley, and Southern Sacramento-San Joaquin Valley regions. In addition, the county is served by an assortment of public-not for profit broadcast entities that provide educational or community-based programming.

Most of Yolo County is also serviced by satellite broadcast companies, which offer paid programming services. Satellite broadcast services provide an alternative source for remote areas of the county not able to receive cable or broadcast television signals.

Yolo County is served by the following local and regional printed newspapers:

- Daily Democrat – Woodland
- Davis Enterprise – Davis
- The News-Ledger – West Sacramento
- The Winters Express – Winters
- Valley Star – West Sacramento
- West Sacramento Press – West Sacramento
- Sacramento Bee – Sacramento

1.4.2 TRANSPORTATION

The following federal interstates and state highways transit through Yolo County:

- Interstate 5 North – South, Sacramento Co into Colusa Co
- Interstate 80 East – West, Sacramento Co into Solano Co
- Interstate 505 North – South, I-5 (Dunnigan) to I-80 (Vacaville)
- State Highway 16 East – West, Woodland west into Colusa Co
- State Highway 45 North – South, Knights Landing into Colusa Co
- State Highway 84 North – South, West Sacramento into Solano Co
- State Highway 113 North – South, I-80 (Davis) north into Colusa Co
- State Route 128 East – West, Winters west into Lake Co

The county is crisscrossed by a selection of rural roads that are maintained by County government. These roads serve all incorporated and unincorporated communities, and connect with both municipal streets grids and the state highway system.

Yolobus, or the Yolo County Transportation Department, provides bus service throughout the unincorporated County. Bus stops are strategically located throughout Yolo County. Service extends into Sacramento County to cover the Sacramento International Airport, and downtown capitol area, where agreements exist with Sacramento Paratransit.

In addition to Yolobus, UC Davis operates the Unitrans bus service, which covers the university campus as well as a major portion of Davis and the unincorporated community of El Macero.

Passenger rail service is provided to Yolo County by Amtrak, with special service under arrangement with the State of California. The Sierra Northern Railway operates the River Train from West Sacramento through the unincorporated County to Woodland. A full passenger rail station is located in Davis, and provides connections to Sacramento, the San Francisco Bay area, and nationwide through the Amtrak rail system.

There are three general aviation airports located in and serving Yolo County:

- Watts-Woodland Airport (Private)
- Yolo County Airport (County)
- UC Davis Airport (University) – Located at UC Davis for flight school training

There are numerous private airstrips scattered throughout the unincorporated County.

The nearest airport with scheduled commercial flights is Sacramento International, which is located just east of Yolo County, off Interstate 5, in Sacramento County.

Access to commercially navigable waterways is provided through the Port of West Sacramento, which serves as a point of receiving and shipping of various bulk commodities. Commercial vessels access the Port of West Sacramento via the Sacramento Deep Water Channel.

1.4.3 UTILITIES

Numerous major commercial pipelines traverse areas of Yolo County, serving as a pathway for pressurized natural gas, fuel, and other commodities. Pacific Gas & Electric provides natural gas service to all municipalities and many unincorporated communities within the county. In addition, propane service is also available to more remote areas of the county, where PG&E service is not readily available.

Pacific Gas & Electric (PG&E) provides electric power and natural gas to all areas of Yolo County. The Sacramento Municipal Utilities District (SMUD) also operates electrical lines through the County. The Wickland Pipeline and Kinder Morgan Pipeline transport hazardous liquids, primarily fuels, through the County.

Centralized wastewater and sewage treatment is managed by all four municipalities, UC Davis, and several special districts that cover various unincorporated communities. Solid waste collection and disposal is provided through established contracts with commercial providers, mainly Waste

Management, in most unincorporated areas of the county. Yolo County maintains a sanitary landfill site, located between Woodland and Davis, where solid waste is processed and buried. The landfill services household hazardous waste, business hazardous waste, electronic waste, and construction and demolition recycling. In addition the County landfill also receives and processes various recyclables for all areas of the county. A recycling and transfer station exists in Esparto.

1.4.4 HEALTH CARE

There are two hospital facilities in Yolo County. Sutter Davis Hospital is a technologically advanced acute care hospital with a strong offering of outpatient services and community outreach programs. The 48-bed hospital and its programs provide care and support to the residents of Davis, Dixon, Winters, Woodland, West Sacramento, Vacaville and rural communities throughout Yolo and Eastern Solano Counties. Woodland Memorial Hospital is the largest in the County and provides a full range of surgical and acute care medical services for both inpatient and outpatient visits. The hospital is a 120 bed, acute care, non-profit facility with an outstanding mix of state-of-the-art equipment and community health and wellness programs. Additionally, the hospital is recognized as the most comprehensive provider of women's and children's medical services in the county, equipped to handle high-risk pregnancies and high-risk infants, as well as the needs of children. This facility also houses a behavioral health unit, and has expanded their psychiatric unit.

The majority of the Yolo's population is located in the south and central portions of the County, with the largest concentration within the City of Davis. Other populated centers include West Sacramento, Winters, and Woodland. Yolo County has a large rural population with dispersed population centers including Brooks, Clarksburg, Dunnigan, Esparto, Knights Landing, Madison, Rumsey, Yolo, and Zamora. Many of these rural entities are located remotely from the designated Trauma Centers, complicating transportation decisions.

1.4.5 EDUCATION

There are several school districts in Yolo County:

- Davis Joint Unified School District
- Esparto Unified School District
- Washington Unified School District
- Winters Joint Unified School District
- Woodland Joint Unified School District

University of California at Davis

Student enrollment: 37,441 (2016)

Campus acreage: 5,300 acres (largest UC campus)

Number of Faculty: 1,888 (2017)

1.4.6 CRITICAL FACILITIES

The following assets have been designated by Yolo County as important to protect in the event of a disaster:

Location	Address	City
Communications Shed	3 rd & B Streets	West Sacramento

Location	Address	City
Probation/Storage	218 West Beamer	Woodland
Emergency Operations Center	120 W. Main Street, Suite E	Woodland
Probation Annex	218 West Beamer	Woodland
Public Works/Planning	292 West Beamer	Woodland
Communication Center	35 N. Cottonwood	Woodland
Yolo County Courthouse	725 Court Street	Woodland
Erwin Meier Administration Building	625 Court Street	Woodland
Cache Creek Water Treatment Plant	1475 Hwy 16	Rumsey
County Landfill	CR 104 & 28H	Woodland
Herbert Bauer M.D. Building	10 Cottonwood	Woodland
Monroe Detention Center	41797 Gibson Rd	Woodland
Leinberg Center	41797 Gibson Rd	Woodland
Sheriff Administration Office	41797 Gibson Rd	Woodland
Morgue	41797 Gibson Rd	Woodland
Airport – Hanger Building	CR95/CR29	Woodland
Airport Electrical Control & Storage Building	CR95/CR29	Woodland

1.5 WEATHER AND CLIMATE

The Central Valley climate can be described as Mediterranean. During the hot, dry, sunny summers, temperatures can exceed 100 degrees F on some days, however more often summer temperatures are in the low 90s. The Sacramento River Delta breeze usually cools overnight temperatures into the 60s. Spring and fall has some of the most pleasant weather in the state. The rainy season typically runs from late fall through early spring and fog season last from November through March. Average annual rainfall is about 17 inches.

1.6 ECONOMICS

Agriculture has been at the heart of Yolo County’s identity, character, economy and way of life since the County’s founding in 1850. Today, over 85 percent of county land is used for agriculture. Traditional growers on large-scale farms share the land with a growing number of diversified small farms (e.g. truck farms), as well as thriving livestock operations. Additionally, many farmers are implementing innovative new models for farm operation, crop choice and mix and marketing. Important contributors to the strength and success of agriculture in Yolo County include the County’s longstanding commitment to agricultural preservation, its focus on directing growth into the existing cities and towns and the presence of UC Davis, which is an international leader in agricultural research and education.

Although past practices have served the county well, changing times have brought new challenges and require additional innovation. Urbanization pressures are likely to continue. Despite recent upturns, the agricultural economy has generally seen lower crop prices, higher costs and a loss of markets and agricultural infrastructure for more traditional crops in recent years. Production has remained level, despite technological advances. It is difficult for family farmers to respond to a growing body of regulatory requirements.

At the same time, the county continues to see growth in higher value crops, organic products, wine grapes and wineries, olives and specialty products such as grass fed beef. Farmers are finding new ways, such as value-added products, direct marketing and agricultural tourism, to diversify and augment their incomes. If Yolo County is to maintain its agricultural land base and a thriving agricultural economy, it needs to continue to adopt new approaches for farmland protection as well as strategies for improving farming as a livelihood.

Despite the closure of sugar beet mills and tomato canneries in recent years, Yolo County remains home to a large share of the region's top food processing companies. Current processing facilities include one tomato processor, two rice mills, nine wineries, eight nut and nut oil processors, three dairies, 16 seed labelers and a prune processor. These are distributed throughout the County, with most rice processing facilities, seed labelers and dairies located in the Woodland area and most walnut hullers located in Winters or Guinda. Wineries are located in Clarksburg, Brooks and the Hungry Hollow area north of Esparto.

In 2007, the total gross valuation of all agricultural crops produced was nearly \$454 million, up 22.5 percent from \$370 million in 2006. Recent trends and future outlook continue upward, although the gross production value of the County's leading crops fluctuates with annual changes in acreage and price. Seed crops and organic production continue their upward trend. Field labor, processing, transporting, marketing and other farm-related services boost the annual contribution of agriculture to the overall Yolo County economy to over \$1 billion.

Approximately 4,200 people were employed on Yolo County farms in 2006, about 4.2 percent of the 100,500 civilian jobs in the County, which is double the State average. This reflects a decrease of 200 jobs or 4 percent since 1995. To the extent that farm inputs are provided locally and outputs are processed locally, they generate additional income and employment for the County. Related uses such as agricultural support businesses, agricultural industrial uses, farm worker camps, stores selling items grown and manufactured in Yolo County, bed and breakfasts, lodges and wineries are also important contributors to the local economy. The income multiplier effect for agricultural uses is roughly 2.0.

Agricultural property and business activity provide a significant portion of the tax base in Yolo County. The tax revenues generated by the agricultural industry are generally lower than would be created by other uses on the same land, however, the cost to provide government services to farms is also lower. Regardless, additional diversification in its economic base would benefit local employment, businesses and the County budget.

SECTION 2.0: HAZARD IDENTIFICATION AND RISK ASSESSMENT

Yolo County identified hazards that affect the city and developed natural hazard profiles based upon the countywide risk assessment, past events and their impacts (see Figure 4).

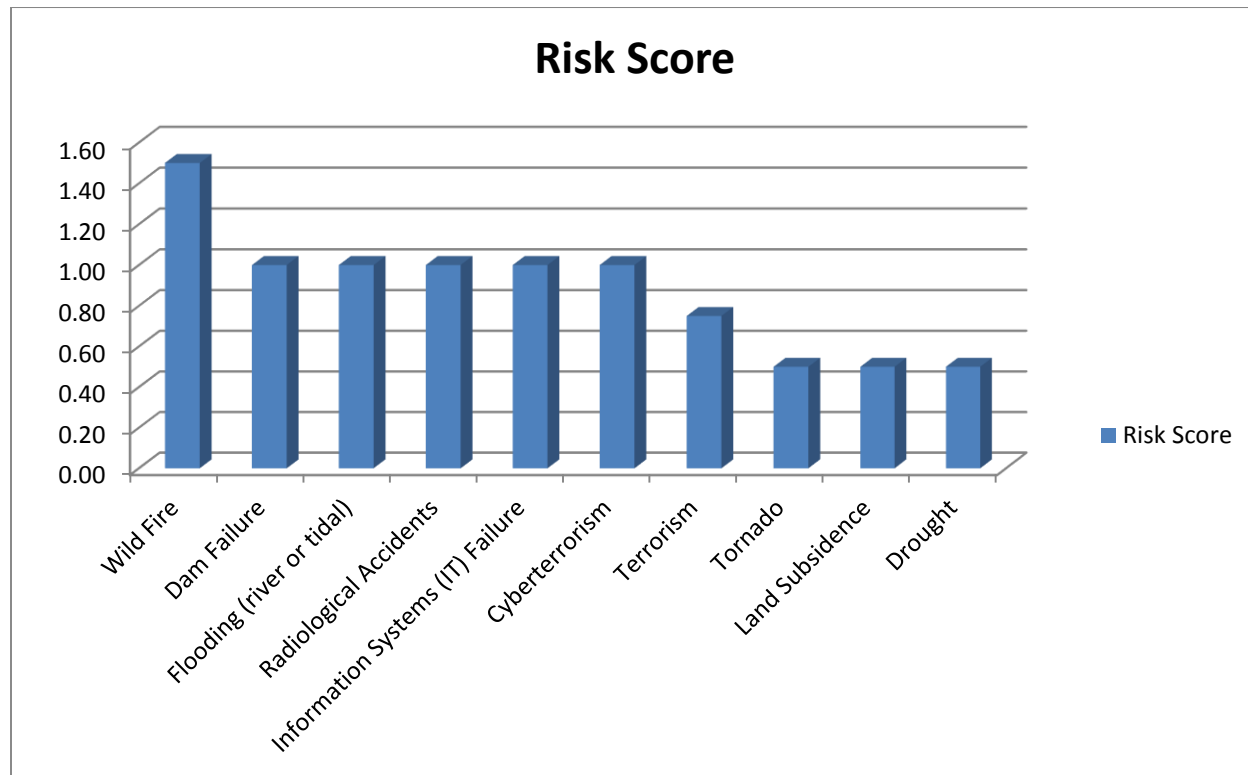


Figure 4: Yolo County Risk Assessment

Definitions for the rankings and a detailed explanation of the hazards can be found in the Hazard Identification and Risk Assessment of the Yolo County Hazard Mitigation Plan (HMP).

2.1 NATURAL HAZARDS

Yolo County identified natural hazards that affect the unincorporated county and developed natural hazard profiles based upon the countywide risk assessment, past events and their impacts. All of the natural hazards profiled in the Yolo County Hazard Mitigation Plan can affect the unincorporated area of the County and are detailed below. No additional hazards are profiled. Definitions for the rankings and a detailed explanation of the hazards can be found the Hazard Identification and Risk Assessment of the Yolo County Hazard Mitigation Plan.

Hazard	Probability of Occurrence	Geographic Extent & Potential Magnitude
Flooding	Likely	Catastrophic

Hazard	Probability of Occurrence	Geographic Extent & Potential Magnitude
Dam Failure	Unlikely	Catastrophic
Levee Failure	Unlikely	Catastrophic
Earthquake	Occasional	Critical
Landslide	Likely	Limited
Land Subsidence	Likely	Critical
Severe Weather - Fog	Highly Likely	Catastrophic
Severe Weather - Tornado	Occasional	Critical
Severe Weather - High Wind	Highly Likely	Critical
Severe Weather - Extreme Heat	Highly Likely	Critical
Severe Weather - Freeze	Likely	Critical
Volcano	Unlikely	Catastrophic
Wildfire	Likely	Catastrophic
Drought	Likely	Critical
Climate Change	Highly Likely	Critical

Table 1: Probability and Extent for Natural Hazards in the City of Davis

2.1.1 FLOODING

Flooding is a significant issue that affects unincorporated Yolo County. In Yolo County, a flood problem is the result of periods of moderate to heavy participation, although the extent, duration, and magnitude is affected by the way the land is developed. Flooding can cause loss of life and injury to persons, damage to structures and property, economic loss due to interrupted activity, inconvenience, and environmental damage. Addressing levee safety and flood hazards in areas within the 100- year floodplain will be necessary to enable growth and development to meet the county’s needs. Policies restricting development in the 100-year floodplain also constrain the supply of land available for new development. The county’s participation on an ongoing basis in the Central Valley Flood Protection Plan, the Regional Flood Management Plan, and the Floodway Corridor Protection Program is critical.

Localized flooding issues can occur throughout the County from rainfall events presenting minor but still significant issues to local districts. With excess rainfall, farmers modify their fields to facilitate proper drainage off their crops. Rainfall can also pose a risk to County roads and culverts because it impacts flow and “natural” drainage patterns. See Figure 5 for a map of road flooding frequency in Yolo County.

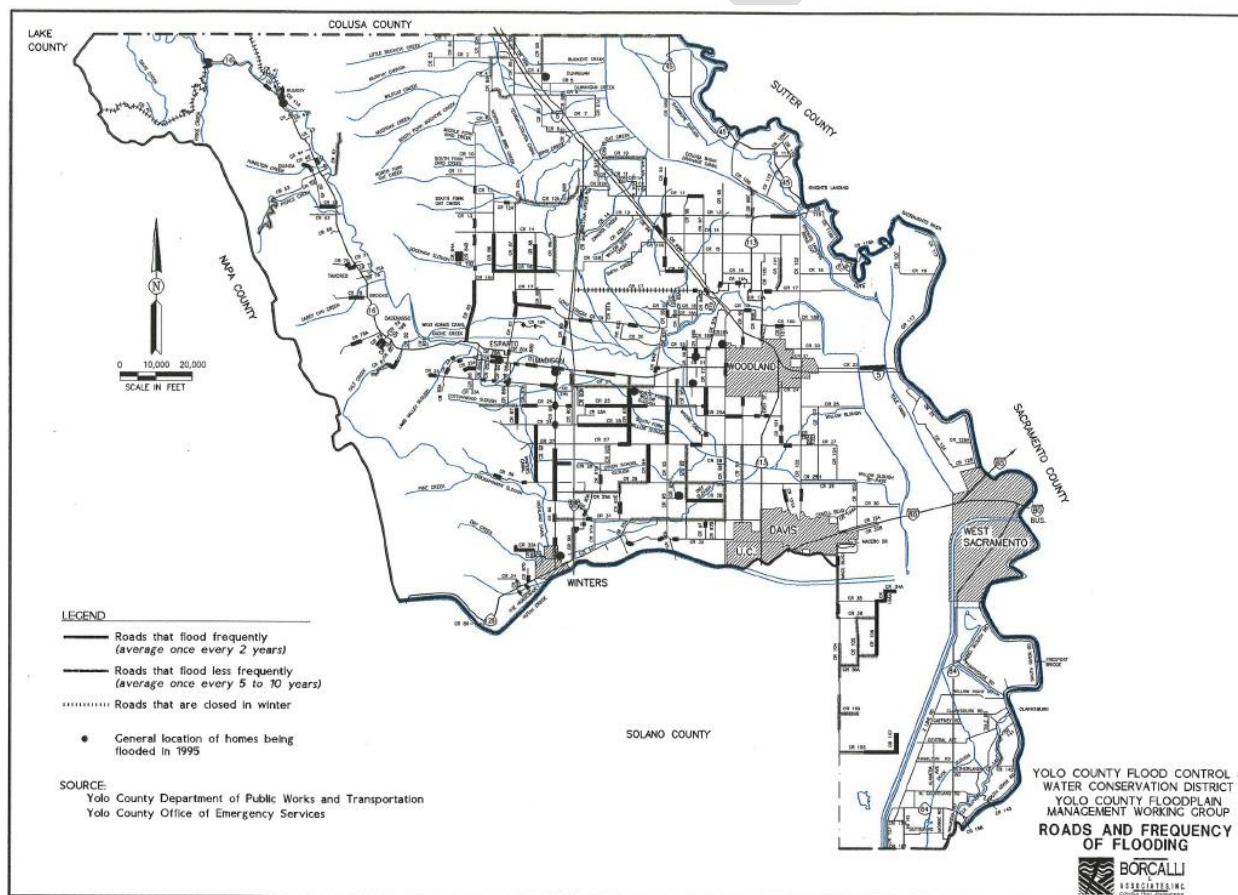


Figure 5: Road Flooding Frequency in Yolo County

The areas of the unincorporated county most vulnerable to flooding include Esparto, Madison, and West Plainfield where extensive flooding of canals and primary roads can cause damage to structures and homes. Flooding occurs from Willow Slough, Union School Slough, Chickahominy Slough, Dry Slough, and Airport Slough. This flooding can cause accelerated gully erosion of rangelands, increased downstream sedimentation, reduced reservoir storage capacity, reduced water quality, fisheries degradation, and increased phreatophytic vegetation. Flooding in the West Plainfield District can cause extensive damage to crops, farm buildings, businesses, residences, septic systems, wells, and vehicles. The YCFCWCD canal system acts as drainage conveyance until the canals are too full and overtop the banks in which the canals pose an issue for local landowners. During heavy rainfall and winds, the YCFCWCD's canal banks can erode and alter the conveyance channel causing Flooding is a periodic and ongoing concern within portions of the Capay Valley. Seasonal rains, coupled with a dependence on limited and relatively unimproved flood control systems to protect areas at risk from inundation places segments of Tribal lands at risk from periodic widespread flooding. The existence of local river systems (i.e. Cache Creek), also contributes to the problem of localized flooding on a periodic basis.

The combination of a narrow stream channel, extensive watershed, steep terrain, and other factors can contribute to extensive flows along the Cache Creek drainage, especially during the winter months when water is released from the Indian Valley Dam to provide space for impounded waters for flood control purposes. Controlled releases of water at the dam may combine with runoff from the watershed within the Capay Valley, resulting in flows exceeding the creek's normal containment capacity and localized flooding.

The impact from any flooding event will vary based upon a number of factors: source of the water; location of water flow; duration of rainfall or source release; topography; presence and/or effectiveness of flood control systems; changes in land use; vegetation; and

- Injury and death associated with people being trapped in rapidly moving waterways or caught unaware during slow rate of rise conditions
- Injury and death for individuals attempting to ford (in vehicles or on foot) submerged roadways
- Damage Capay Valley roadways, bridges and other transportation structures affecting mobility and the ability for people to evacuate flooded areas
- Release of hazardous materials and start of fires within damaged or affected structures.
- Damage Capay Valley buildings and structures in the pathway of rising flood waters
- Public health hazards from contamination of potable water sources; damage to sanitation systems; long term presence of standing water; vector infestation; and introduction of hazardous materials contaminants.

Specific spots near tribal lands that have flooded in the past are as follows:

- The unincorporated area of Rumsey along Hwy 16 in 1986
- Various spots of localized flooding across Hwy 16 and O Leary Ln in Rumsey to Capay at least 6" deep in 24 hr period
- Near the Capay Valley Fire District on Hwy 16 in Brooks;

- The Town of Madison in 2017

See the following figures for community floodplains throughout the unincorporated County:

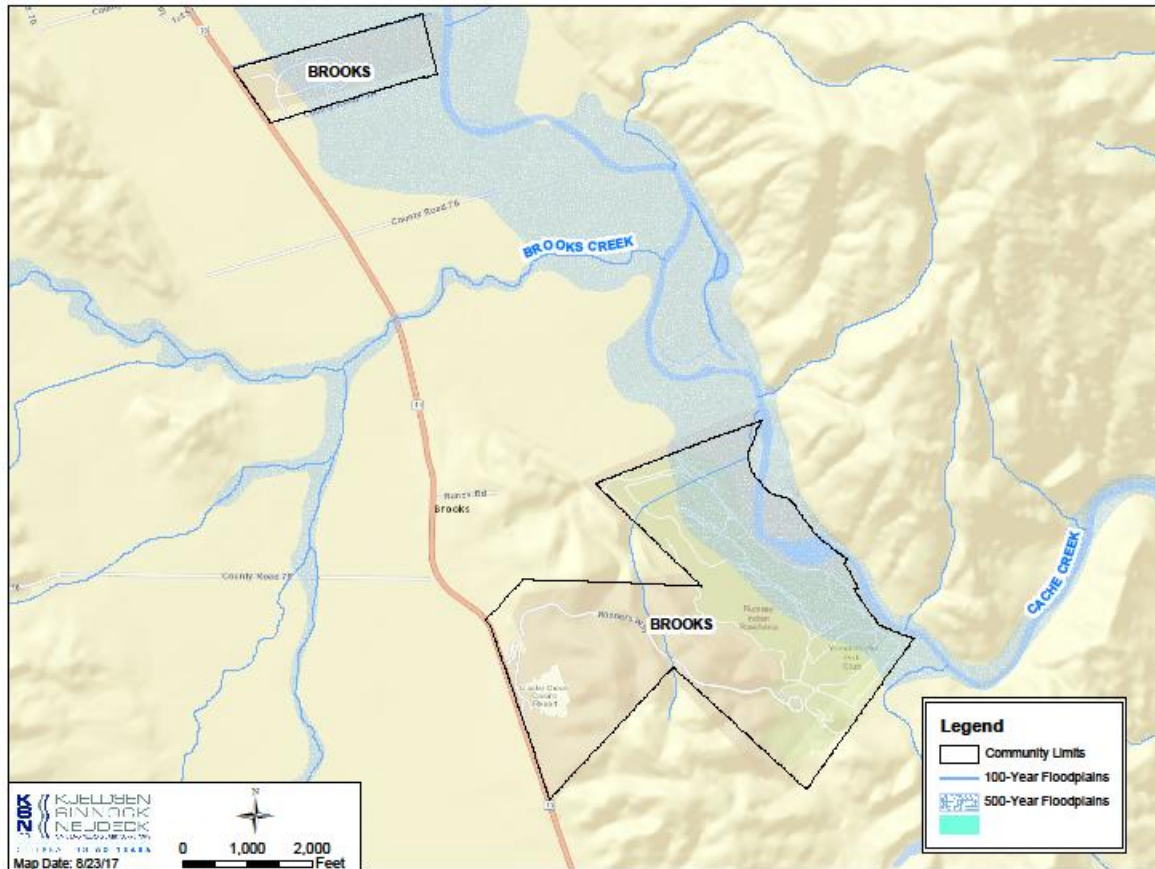


Figure 6: Brooks Floodplain

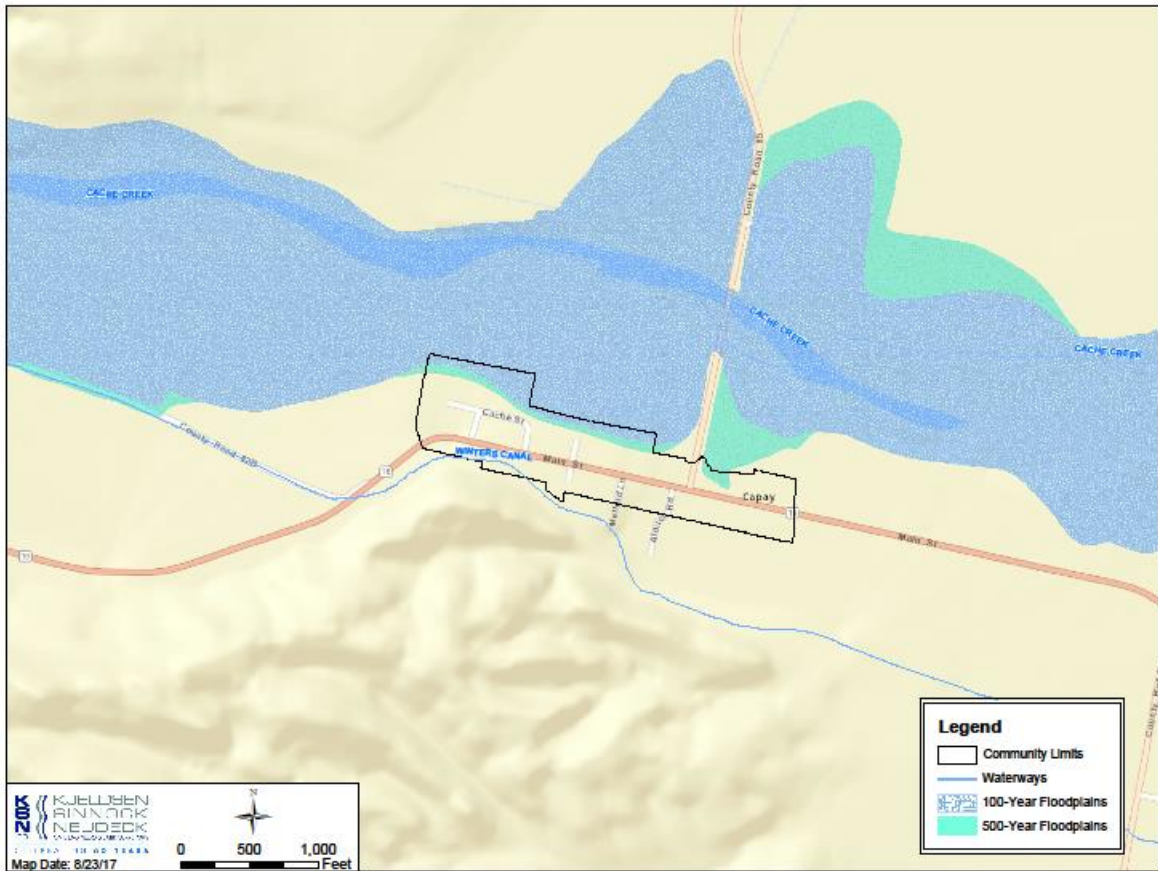


Figure 7: Capay Floodplain



Figure 8: Clarksburg Floodplain

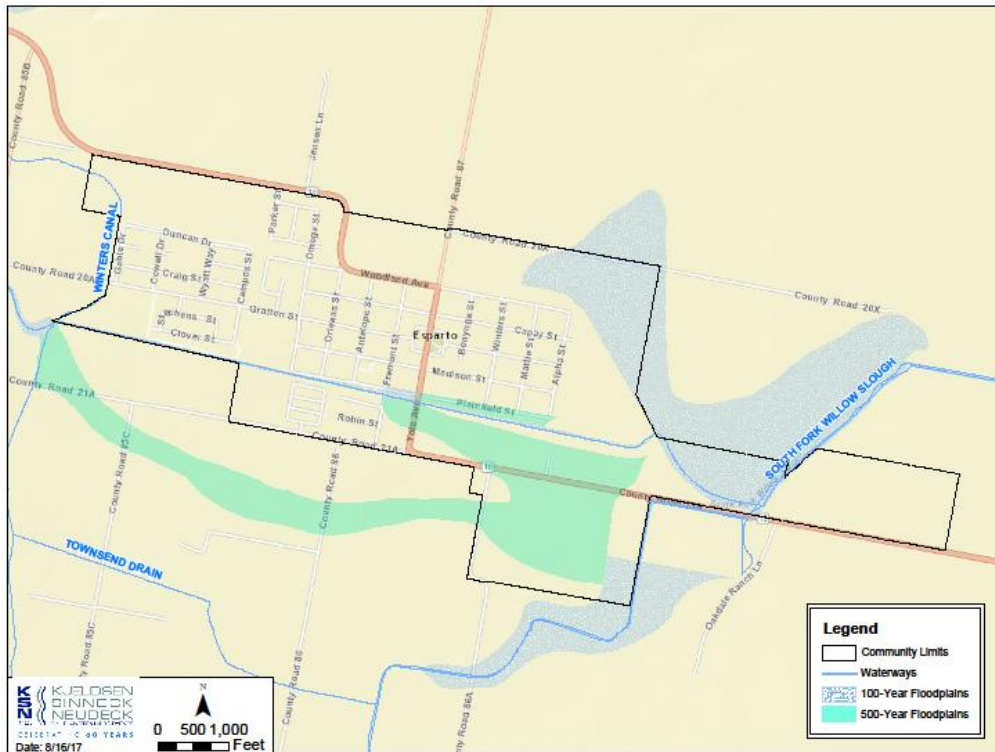


Figure 10: Esparto Floodplain

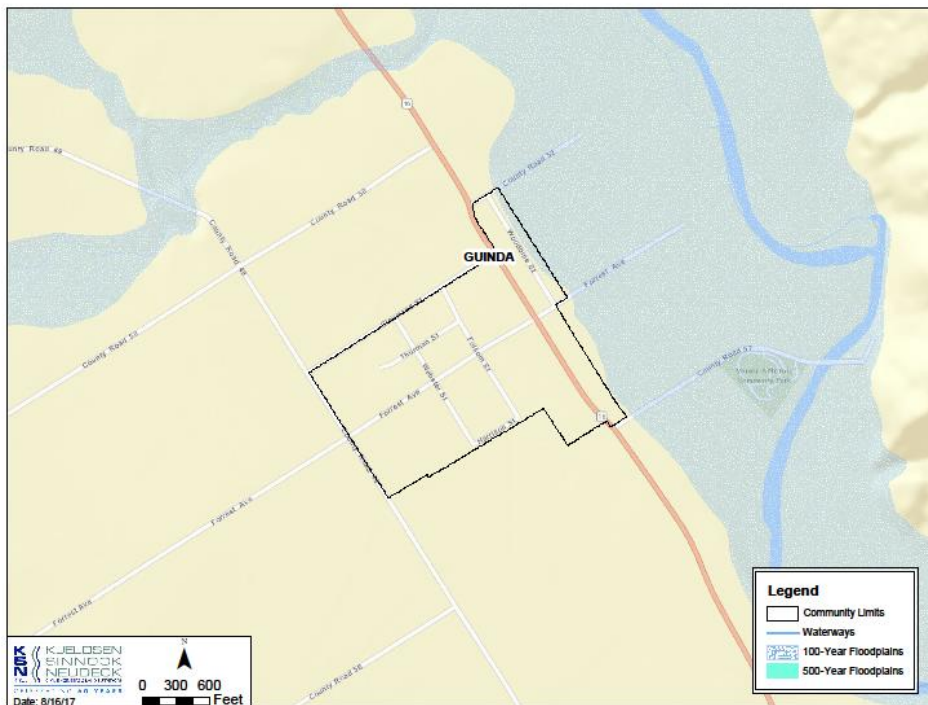


Figure 11: Guinda Floodplain

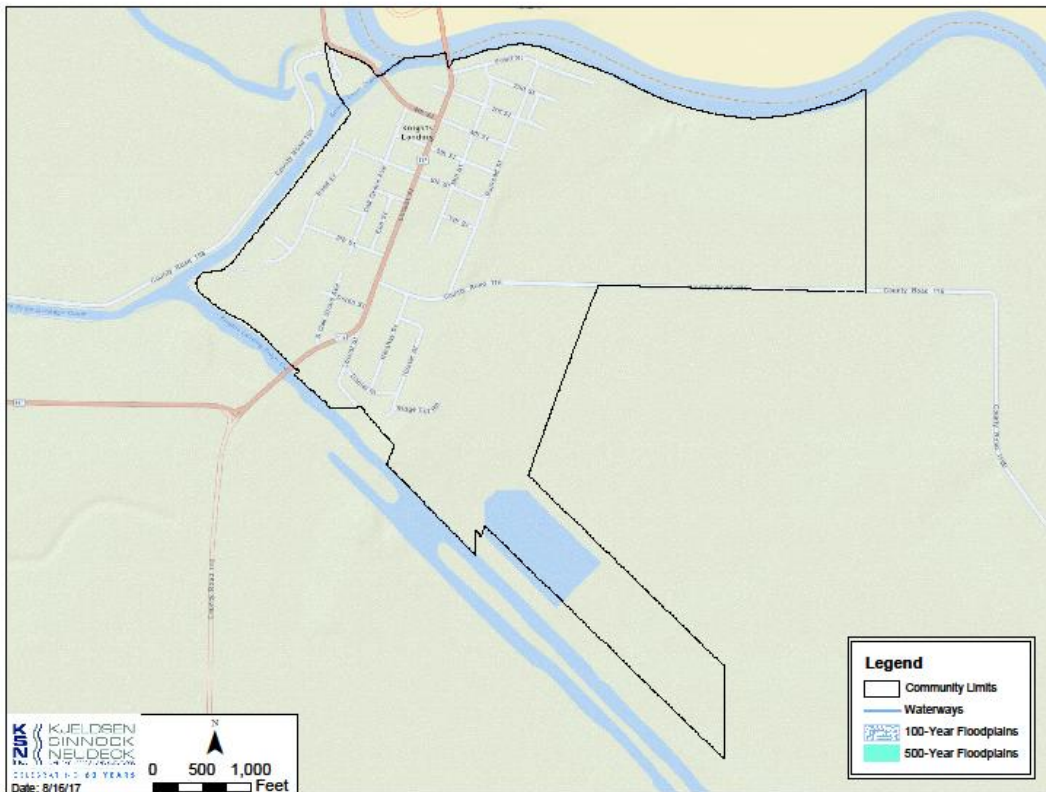


Figure 12: Knights Landing Floodplain

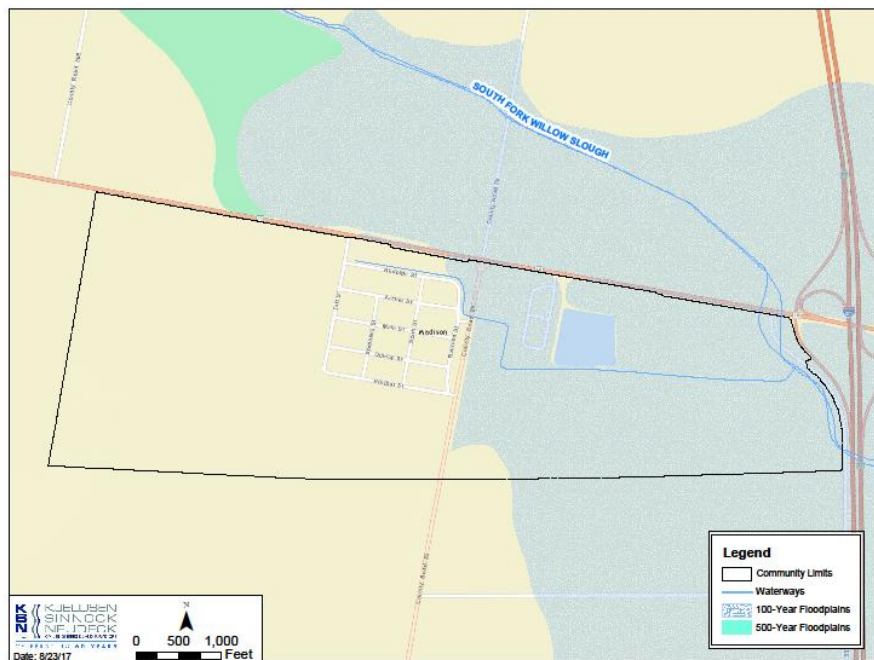


Figure 13: Madison Floodplain

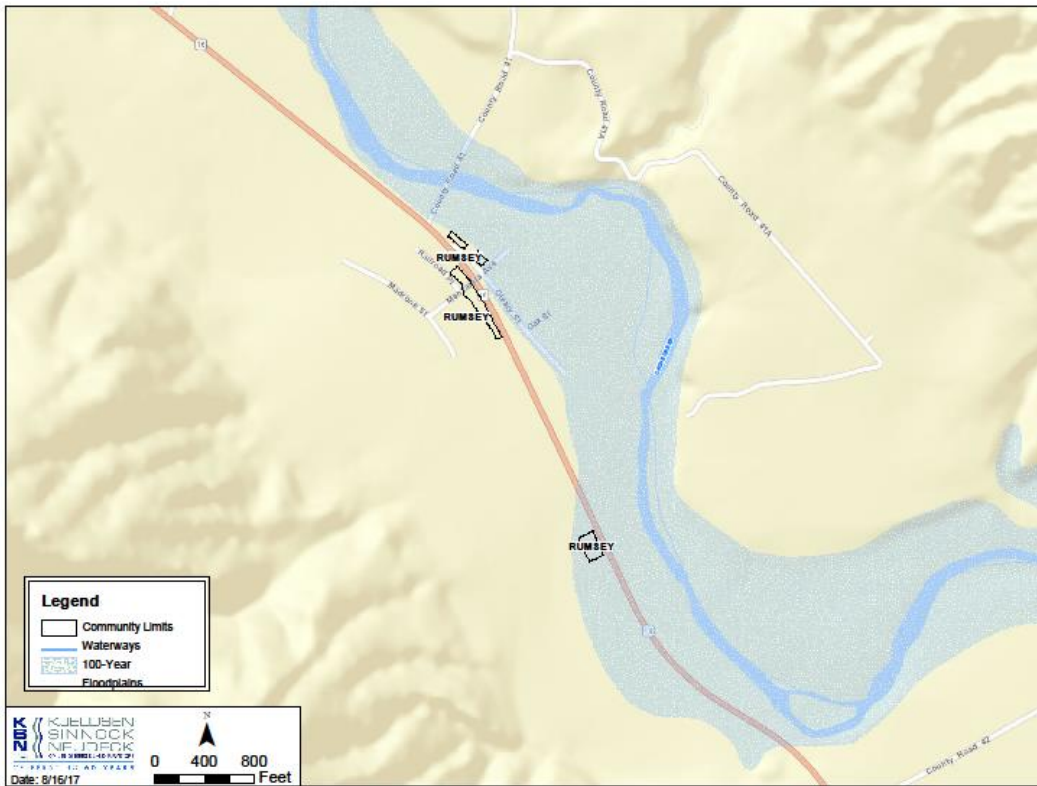


Figure 14: Rumsey Floodplain

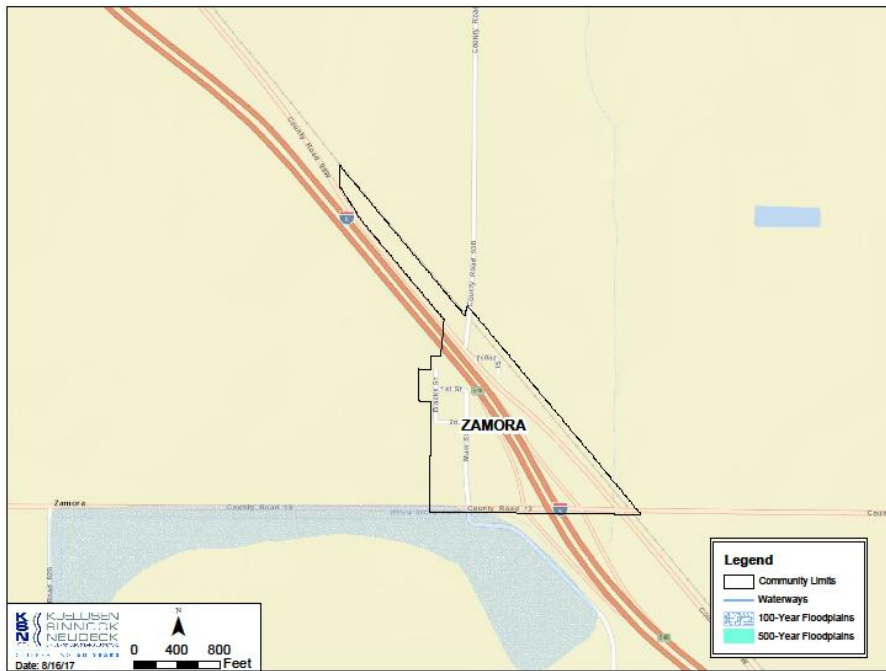


Figure 15: Zamora Floodplain

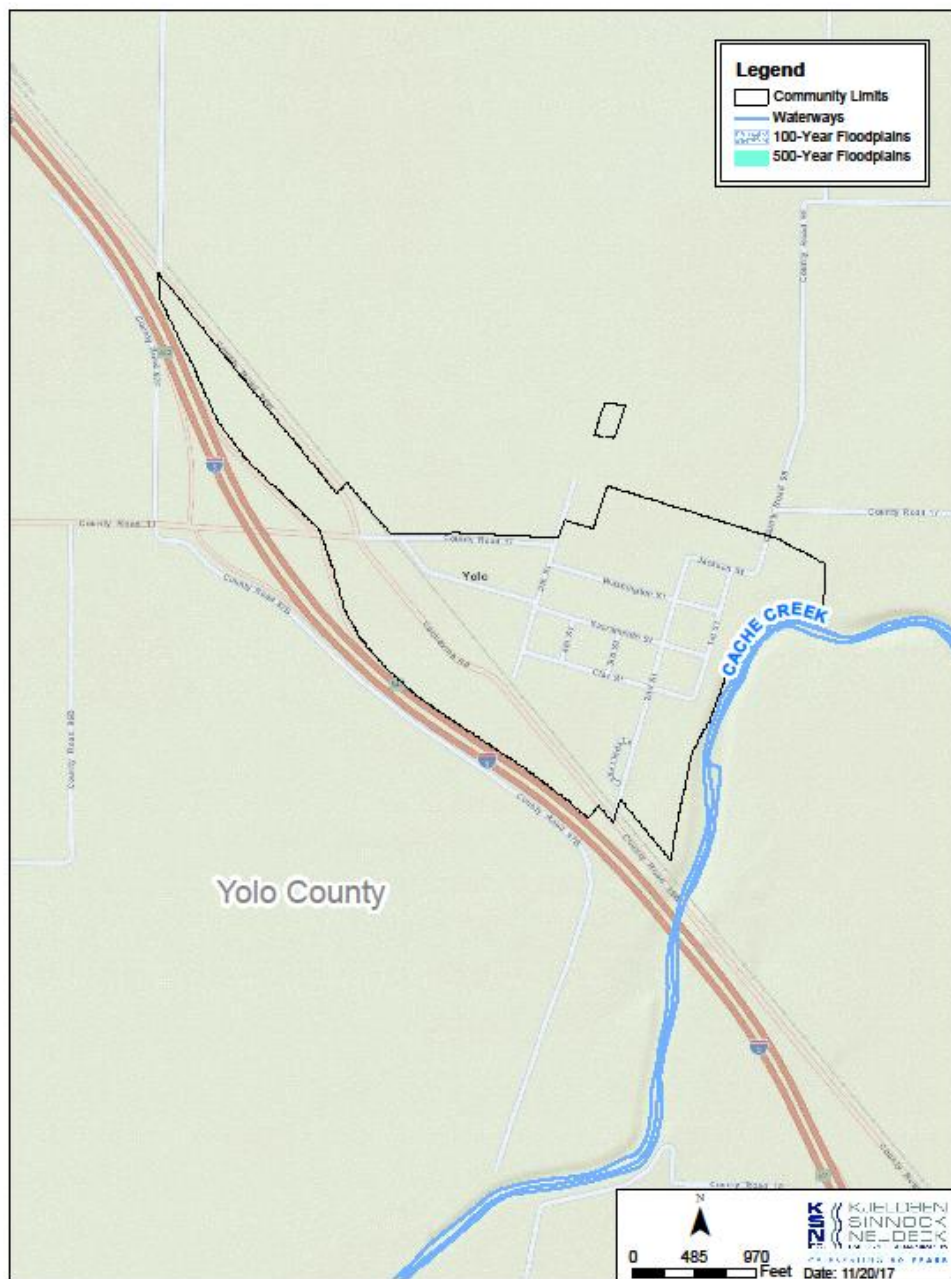


Figure 16: Yolo Floodplain

2.1.2 DAM FAILURE

In the area of the unincorporated County there are dams of various types of construction. The failure of any one would cause some degree of flooding in the unincorporated County. Failure of a dam structure may result due to impact from strong ground motion, such as following a major earthquake, below are some of the dams that could affect the county:

- Shasta Dam Sacramento River
- Oroville Dam Feather River
- Folsom Dam American River
- Monticello Dam Putah Creek
- Indian Valley Dam Cache Creek

Maps associated with each dam show specific inundation areas. In most cases, areas requiring evacuation are many minutes to days downstream.

For other than catastrophic failure of a dam, notification of a potential problem would be initiated by the agency responsible for maintaining the dam in question. Depending upon the dam, that notification might be provided directly to Yolo County. For a catastrophic failure, notice could come as described above, from citizens or even from news media. The more lead time available the more chance that notifications would come from normal sources.

The following is more detailed information about the dams, the times and areas given for potential inundation are the best available estimates. Actual inundation times and areas may vary.

Shasta Dam

Shasta Dam is a concrete gravity dam. The reservoir (Lake Shasta) has a maximum storage capacity of 4,552,000 acre-feet. The dam is located in Shasta County. Dam failure would result in varying degrees of inundation to eastern Yolo County including Knights Landing and Clarksburg.

Oroville Dam

Oroville Dam is an earth-filled dam. The reservoir (Oroville Lake) has a maximum storage capacity of 3,500,000 acre-feet. The dam is located in Butte County. Dam failure would result in varying degrees of inundation to eastern Yolo County including Knights Landing.

Folsom Dam

Folsom Dam is a concrete and earth dam. The lake has a maximum storage capacity of 977,000 acre-feet. The dam is located in Sacramento County, on the American River. Dam failure would result in some degree of inundation to the eastern side of the County.

Nimbus Dam

Nimbus Dam is a concrete gravity dam. The reservoir (Lake Natoma) has a maximum storage capacity of 8,760 acre-feet. The dam is located in Sacramento County. All actions relating to a failure of Nimbus Dam would be identical to those required by a failure of Folsom Dam except the resulting inundation would be less severe.

Monticello Dam

Monticello Dam is a thin arch concrete structure 270 feet high. It impounds a maximum of 1,602,300 acre-feet creating Lake Berryessa in Napa County, 10 miles west of Winters. In the event of failure, Monticello Dam presents a high hazard to downstream areas and extensive loss of life and property would likely occur.

Indian Valley Dam

Indian Valley Dam is an earth-filled dam producing a lake of 359,000 acre-feet storage capacity (maximum). The dam is located in Lake County, northwest of Yolo County, on the North Fork of Cache Creek. Depending upon the rate of discharge following dam failure the area of potential inundation extends along the Cache Creek all the way to the I-80 and the Yolo Bypass. Unincorporated communities in the Capay Valley are vulnerable to an Indian Valley Dam failure.

The extent of local damage and destruction associated with failure of a major dam will range from catastrophic to marginal. The sudden failure of an earthen or concrete dam of any significant size would result in the release of hundreds of thousands of acre-feet of water, depending upon the level of impoundment at the time of failure. It would be anticipated that areas directly downstream from the face of a failed dam would be immediately inundated and that devastation would be substantial. The further a location is from the dam would result in a reduced impact over time, although geography and the placement of diversionary facilities and other improvements would play a part in how floodwaters would be channeled.

2.1.3 LEVEE FAILURE

See the Yolo County Hazard Mitigation Plan for a detailed assessment on levee vulnerability to the unincorporated areas of Yolo County.

2.1.4 EARTHQUAKE

Earthquakes can occur anywhere in unincorporated Yolo County. The highest likelihood of a major earthquake occurring is in the Capay Valley as well as the western portion of the county, near the unincorporated communities of Madison and Esparto. These are seismically active areas where previous earthquakes have occurred. In addition, the effects of a Bay Area earthquake can be critical to catastrophic for Yolo County. The Interstate 80 corridor lies directly in Yolo County and would be a primary evacuation route for people leaving the Bay Area. This would greatly impact the county in having to support the Bay Area with mutual aid and evacuation support such as food, lodging and other resources.

2.1.5 LANDSLIDE

Unincorporated Yolo County is the only area of the County where landslides are likely to occur. The primary area for landslide activity is the State Route 16 corridor through the Cache Creek Canyon as well as State Route 128 along Putah Creek. Landslides occur in the Cache Creek Canyon every year, and State Route 16 is usually closed in the winter from Rumsey to the Colusa County line. The Cache Creek Regional Park Campground as well as several other day use areas are located in the Cache Creek Canyon. People frequenting them could become adversely affected by a landslide that closes State Route 16. An earthquake has the potential to cause landslides in this area, as had occurred with the 1906 San Francisco Earthquake. The earthquake caused a significant landslide that dammed Cache Creek, which eventually flooded the town of Rumsey.

2.1.6 SEVERE WEATHER

HIGH WIND

High wind could occur anywhere in unincorporated Yolo County and could be compounded by atmospheric river events. High winds can fell trees, which can cause subsequent damages to cars and structures as well as critical infrastructure such as power lines and water mains throughout the county. Power outages in the unincorporated county from high wind occurs frequently.

FOG

Fog can be prevalent throughout the unincorporated County, particularly along the Sacramento and adjacent river roads. Impacts from fog can be compounded in due the presence of four major highways including Interstate 80, Interstate 5, Interstate 505, and State Route 113, which run through unincorporated parts of the county. The potential for serious accidents exist due to fog, which could result in injuries and fatalities to motorists and first responders.

TORNADO

A tornado could touch down anywhere in the unincorporated county. Though tornados in the Central Valley of California are often rare and of low intensity (EF-0 or EF-1), the potential exists for an EF-2 tornado to touch down in the unincorporated County as it did in Sacramento in 1978. While unlikely, impacts from such a tornado could be extensive depending on where the tornado touches down and how long it travels. Roofs of structures could be significantly damaged, trees could be knocked over, and cars could be overturned. A less intense EF-0 or EF-1 tornado could cause flying debris and damage to fences. Tornados can also produce hail, which can be damaging to cars and buildings.

EXTREME HEAT

Extreme heat can occur at any location in the unincorporated County, though it is usually warmer in the Capay Valley. Temperatures can feel warmer in towns due to the widespread presence of concrete and asphalt, which stores heat longer. Heat waves can cause power outages and can sicken people who are exposed to high temperatures too long, particularly infants the elderly.

FREEZE

Freezing temperatures can occur at any location in the unincorporated County. Prolonged exposure to the cold can cause frostbite or hypothermia and can become life-threatening. Infants and the elderly are most susceptible. Pipes may freeze and burst in homes or buildings that are poorly insulated or without heat. Extreme cold can disrupt or impair communications facilities.

2.1.7 VOLCANO

The unincorporated county is not located close to any active volcanoes where there is the threat of a lahar flow. The closest volcano to the unincorporated County is the Clear Lake/Mt. Konocti Volcanic Field. The unincorporated County could be impacted by ash fall, however, if there were to occur a significant eruption of any of the active volcanoes located throughout the state. Particular areas of concern include the Mt. Shasta, Lassen Volcanic Center, Medicine Lake, and the Clear Lake/Mt. Konocti Volcanic Field. People susceptible to respiratory illnesses would be most impacted by ash fall.

2.1.8 WILDFIRE

The unincorporated County includes the western, more mountains areas of the county where large wildfires are more apt to occur. A wildfire in this area has the potential to significantly impact the Capay Valley, and could result in evacuations. Since the last plan update, several large wildfires have burned in the Blue Ridge Mountains between Yolo, Napa, and Lake Counties. They have included the 2014 Monticello Fire, the 2015 Wragg Fire, the 2015 Rocky Fire, the 2015 Jerusalem Fire, the 2016 Cold Fire, and the 2017 Winter Fire. See figure X for a map of historic wildfires in Yolo County. Large fires along State Route 16 can impact local resources and access to the communities along the highway. The Yocha Dehe Casino is a large economic asset to the area. Grass fires are also of concern in the unincorporated areas of the county. A 10 acre grass fire in Dunnigan in 2016 destroyed a house, and the Hardwoods Subdivision is of particular concern for a grass fire.

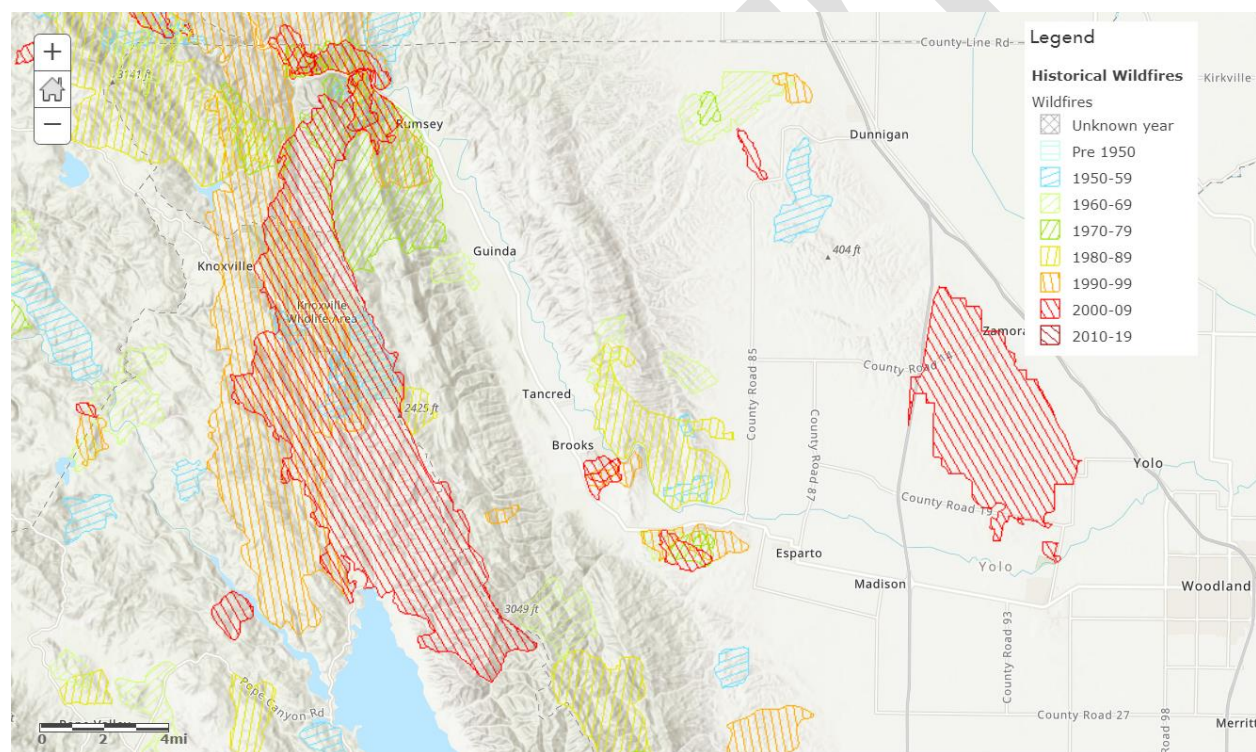


Figure 17: Historic Wildfires in Yolo County
Source: Yolo County GIS

2.1.9 DROUGHT

The most significant impacts associated with drought in Yolo County are those related to water intensive activities such as agriculture, wildfire protection, municipal usage, commerce, tourism, recreation, and wildlife preservation. Voluntary conservation measures are typically implemented during extended droughts. A reduction of electric power generation and water quality deterioration are also potential problems. Drought conditions can also cause soil to compact and not absorb water well, potentially making an area more susceptible to flooding. Historical reports have

estimated that agriculture is responsible for approximately 95 percent of the County’s total groundwater use.

In the unincorporated County, droughts have been recorded in 1976-1977, 1988-1992, 2007-2009, and 2014-2016. Groundwater levels reached the lowest point ever recorded in the 1976-1977 drought, and the second lowest point ever recorded in 2014. Collapsed well housings in the Knights Landing area occurred during the height of the drought.

The Sustainable Groundwater Management Act (SGMA) establishes a framework for sustainable, local groundwater management. SGMA requires groundwater-dependent regions to halt overdraft and bring basins into balanced levels of pumping and recharge. The Yolo County Flood Control and Water Conservation District is the oversight agency for SGMA in the Yolo Sub-basin. See Figure 18 for a graph of groundwater levels in Yolo County from 1975-2017. Average fall 2017 groundwater level in Yolo County is 43 feet depth to water.

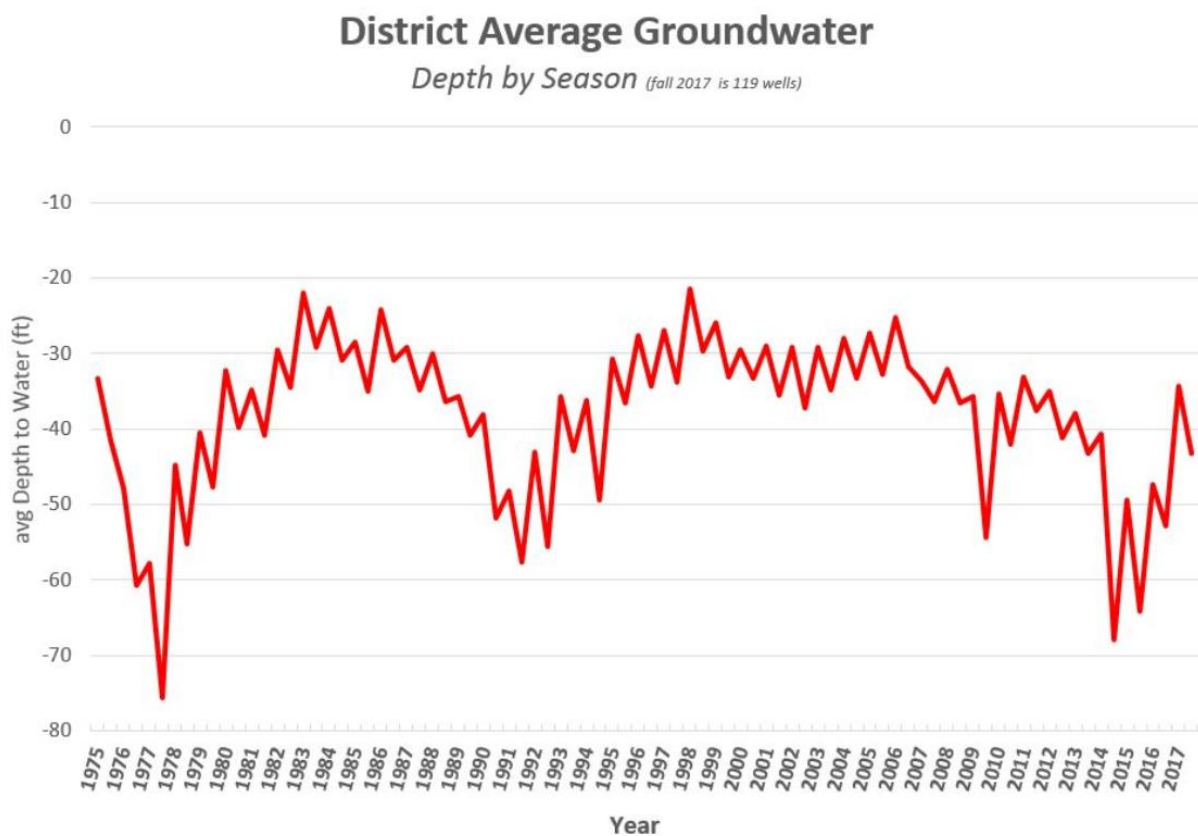


Figure 18: Average Groundwater Depth in Yolo County 1975-2017

2.1.10 CLIMATE CHANGE

Yolo County has recognized the need to plan for climate change, and has adopted the Yolo County Climate Action Plan. Yolo County has a strong commitment to the reduction of greenhouse gas (GHG) emissions, which is balanced with its strong commitment to agriculture and the role of agriculture in reducing GHG emissions. This is the result of the County’s long-term advocacy of

responsible growth, agricultural and open space preservation and energy conservation. With regard to climate change, this history goes back to 1982, when the County adopted a countywide Energy Plan, one of the first of its kind in the State. More recently, in 2007, the Board of Supervisors unanimously approved a resolution to participate in the Cool Counties Climate Stabilization Declaration and committed to reduce GHG emissions by 80% by 2050. The 2030 Yolo County General Plan expanded on this established tradition and contains more than 350 climate change-focused policies and actions. General Plan Action CO-A117 calls for the development of a GHG Emissions Reduction Plan and/or Climate Action (CAP) for the County, to reduce GHG emissions, and to address economic and social adaptation to the effects of climate change. The CAP builds on the General Plan's vision and outlines detailed strategies and measures to achieve these goals and contribute to State and international climate protection efforts.

2.2 HAZARD RISK ASSESSMENT – TECHNOLOGICAL AND HUMAN-CAUSED HAZARDS

2.2.1 AGRICULTURAL PESTS AND DISEASES

The unincorporated County is vulnerable to myriad agricultural pests and diseases. Some of the most common threats include the yellow starthistle, Japanese dodder, walnut twig beetle, and the California ground squirrel. Given the County's large agricultural community, these pests and diseases pose major threats.

2.2.2 EPIDEMIC/PANDEMIC

The unincorporated County can experience the same epidemics and pandemics that occur throughout the rest of Yolo County. Mitigation measures would be taken under the general direction of the Yolo County Public Health Officer. Yolo County has prepared for previous potential outbreaks including swine flu, avian flu and ebola. Preparation will vary based on the nature of the disease, but primarily consists of planning for a diminished workforce, treating large numbers of affected citizens, assistance with vaccine clinics due to large crowds, and personal prevention measures.

2.2.3 HAZMAT INCIDENTS

RADIOLOGICAL

The unincorporated County does not have any meaningful exposure to a nuclear power plant. It could be affected, however, by a transportation accident, a terrorist incident or war.

CHEMICAL

There are numerous facilities in the unincorporated County that house chemical agents, including anhydrous ammonia, and there are several transportation routes where a chemical incident could occur. Yolo County Environmental Health is the CUPA Regulatory Agency for Yolo County, and helps the County prepare for a chemical emergency.

BIOLOGICAL

A biological incident or attack would cause a strain on the emergency health system including emergency response, local hospitals and other health care facilities. See the Yolo County Hazard Mitigation Plan for the different criteria of biological agents.

2.2.4 TRANSPORTATION ACCIDENTS

VEHICLE ACCIDENTS

There are three interstates and several major state highways that traverse Yolo County. A mass fatality and/or hazmat incident could occur on any one of Yolo County's major highways including all of the interstates as well as State Highways 113, 16, and 84. In Yolo County, fog can play a significant role causing a multi-vehicle accident.

TRAIN ACCIDENTS

A train accident could occur on any of the rail lines that traverse the unincorporated County, including the Union Pacific and Sierra Northern Railway lines which pass through unpopulated areas of the unincorporated County. The California Northern Railroad passes through the unincorporated communities of Dunnigan, Yolo, and Zamora where an accident could impact one of these communities.

AIRPLANE ACCIDENTS

The two small airports that are located in the unincorporated County include Watts-Woodland Airport and the Yolo County Airport. An incident could occur at any one of these airports. Several private airfields also exist in Yolo County. There have been several incidents where crop dusters have collided over the unincorporated County. Flight paths out of Sacramento International Airport traverse parts of the unincorporated County, and there could occur a crash of a large aircraft in an unpopulated area.

2.2.5 POWER/UTILITY FAILURE

Numerous transmission lines and pipelines traverse Yolo County, and an incident could occur along these lines are at a junction. Power failure often occurs in areas of the unincorporated County, including Dunnigan and Clarksburg, due to high winds and rain events.

2.2.6 COMMUNICATIONS/IT FAILURE

There are no communications in the Capay Valley, and no cell phone service in the Cache Creek Canyon. This could hamper response efforts in an incident.

2.2.7 TERRORISM

The threat of terrorism in any of the communities in the unincorporated County is considered low as these areas aren't heavily populated. Agroterrorism could occur throughout the unincorporated County, due to the large presence of farmland and agricultural commodities. This could significantly impact the local economy and may present a health hazard to local residents.

2.2.8 CIVIL DISTURBANCE

The threat of civil disturbance in any of the communities in the unincorporated County is considered low as these areas aren't heavily populated. A small disturbance could occur for political reasons or because of a local issue.

2.2.9 URBAN CONFLAGRATION

Fire could potentially sweep through any of the unincorporated cities in Yolo County as a result of a wildfire or grass fire, though infrastructure in most of these areas is spread out. Fire protection districts located throughout Yolo County would be able to respond quickly to an incident, but could be hampered by weather conditions.

2.3 PARTICIPATION IN THE NATIONAL FLOOD INSURANCE PROGRAM

The County of Yolo participates in the NFIP and continues to enforce the compliance with the NFIP through their Flood Plain Management Ordinance. However, as in much of California, FEMA is working with local governments to refine and remap the floodplains. These changes to flood mapping and zoning in Woodland may result in additional properties needing to be insured and evaluated in future plans.

CID #	Community Name	FHBM Identified	FIRM Identified	Current Effective Map Date	Reg-Emer Date	Tribal
060424	City of Davis	11/08/77	11/15/79	06/08/10	11/15/79	No
060728	City of West Sacramento		03/05/90	01/19/95	03/13/90	No
060425	City of Winters	01/23/74	12/01/78	06/18/10	12/01/78	No
060426	City of Woodland	02/01/74	10/16/79	05/16/12	10/16/70	No
060423	Yolo County	10/18/77	12/16/80	05/16/12	12/16/80	No

Data obtained from the FEMA Community Status Book Report, <http://www.fema.gov/fema/csb.shtm>

Below is the NFIP policy and claims statistics for the County of Yolo as of March 2013. The NFIP claims statistics are historical back to 1982/1983 when NFIP started collecting this data.

Community	Total Premium	Current Policies	Total Coverage	Flood Losses	Dollars Paid Historical
Unincorporated Areas	\$966,689	1,112	\$273,037	194	\$2,275,154

As of 2017 there are 34 repetitive loss properties and zero severe repetitive loss properties in unincorporated Yolo County. Total RLP payouts are \$1,432,329.80.

Yolo County participates in the Community Rating System and currently holds a Class 8 rating.

SECTION 3.0 MITIGATION STRATEGY

3.1 CAPABILITY ASSESSMENT

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

3.1.1 REGULATORY CAPABILITY

The legal and regulatory capabilities of each jurisdiction are shown in the table below, which presents the existing ordinances and codes that affect the physical or built environment of each jurisdiction. Examples of legal and/or regulatory capabilities can include: a jurisdiction’s building codes, zoning ordinances, subdivision ordinances, special purpose ordinances, growth management ordinances, site plan review, general plans, capital improvement plans, economic development plans, emergency response plans, and real estate disclosure plans.

Yolo County Regulatory and Planning Capabilities

Regulatory Tools	YOA	WLD	DAV	WSAC	WIN	YDH
Building code	√	√	√	√	√	√
Zoning ordinance	√	√	√		√	√
Subdivision ordinance or regulations	√	√	√		√	
Special purpose ordinances (floodplain management, storm water management, hillside or steep slope ordinances, wildfire ordinances, hazard setback requirements)	√	√	√	√	√	√
Growth management ordinances (also called “smart growth” or anti-sprawl programs)	√	√	√	√	√	√
Site plan review requirements	√	√	√	√	√	√
General or comprehensive plan	√	√	√	√	√	
A capital improvements plan	√	√	√		√	√
An economic development plan	√	√	√	√	√	√
An emergency response plan	√	√	√	√	√	√
A post-disaster recovery plan						√
A post-disaster recovery ordinance						

Regulatory Tools	YOA	WLD	DAV	WSAC	WIN	YDH
Real estate disclosure requirements	√	√	√	√	√	
Habitat Management Plan	√	√	√	√	√	
Master Drainage, Sewer, Water, & Reclaimed Water	√	√	√	√	√	√
Redevelopment Master Plan	√	√	√		√	

Source: Steering Committee

Yolo County General Plan

The 2030 Countywide General Plan establishes County policy regarding planned land uses and infrastructure within the unincorporated areas of Yolo County. The 2030 General Plan was adopted by the Board of Supervisors on November 10, 2009 and has been amended several times since.

Yolo County EOP 2017

The Emergency Operations Plan addresses the planned response to emergency situations associated with natural disasters, technological incidents, human caused events and national security emergencies in or affecting Yolo County. The plan establishes the emergency management organization required to mitigate any significant emergency or disaster affecting Yolo County; identifies the policies, responsibilities, and procedures required to protect the health and safety of communities, public and private property, and the environmental effects of natural, human caused and technological emergencies and disasters; and establishes the operational concepts and policies for disaster response and recovery. This plan will be revised and updated in 2018 to meet local, state and federal needs.

Yolo County Delta, Flood Protection & Infrastructure Projects Plan

A prioritized list of short-term, medium, and long-term projects for the improvement of infrastructure and flood protection within the Yolo County Delta. This is a 20-year plan for the County. The list includes: project description, estimated funding amount, proposed funding source, and the region the project is located.

2011 Flood Management Workplan

A list of current lead agencies, cost, and statuses of both physical and legislative level projects currently being worked on to improve floodplain management in Yolo County.

Yolo County Habitat Conservation Plan/Natural Community Conservation Plan

A plan inclusive of biological goals, geographic area, plan duration, species to be addressed, and actions to be permitted to protect the natural resources of Yolo County.

Emergency Management/Preparedness Program

The Office of Emergency Services (OES), a program within the County Administrator’s Office, is responsible for coordinating the planning for, response to, and recovery from all-hazards that may impact Yolo County. These duties include:

- Identification and assessment of potential hazards and threats
- Development, implementation, and maintenance of appropriate contingency plans
- Development and presentation of community and interagency preparedness programs
- Coordination of interagency emergency management for the Yolo Operational Area
- Maintenance and management of the county Emergency Operations Center (EOC) in support of emergency response operations

Other plans and ordinances such as the Fire Management Plan, the Central Valley Food Protection Plan, the Regional Flood Management Plan, the Emergency Services, Fire Prevention, Flood Management and other important ordinances to the County as documented in the **Regulatory and Planning Capabilities** table are located on Yolo County’s website at www.yolocounty.org.

3.1.2 ADMINISTRATIVE AND TECHNICAL CAPABILITY

The **Administrative and Technical Capability** table identifies the county personnel responsible for activities related to mitigation and loss prevention in Yolo County. Many positions are full time and/or filled by the same person. A summary of technical resources follows.

Unincorporated Yolo County Personnel Capabilities

Personnel Resources	Department/Position
Engineer and/or Planner with knowledge of land development/land management practices	Planning and Public Works Department
Professional trained in construction practices related to buildings and/or infrastructure	County Community Development Agency/County Building Official, Planning and Public Works Department
Full time Building Official	County Community Development Agency/County Building Official
Floodplain Manager	Planning and Public Works Department
Emergency Manager	County Office of Emergency Services
Grant Writer	YES various departments
Other Personnel Resources such as Personnel skilled in GIS and/or HAZUS	County Administrative Office, IT Department, Sheriff’s Office, and other County Departments and Agencies

Source: Steering Committee

3.1.3 FISCAL CAPABILITY

The **Fiscal Capability** table shows specific financial and budgetary tools available to the jurisdictions such as community development block grants; capital improvements project funding; authority to levy taxes for specific purposes; fees for water, sewer, gas, or electric services; impact

fees for homebuyers or developers for new development; ability to incur debt through general obligations bonds; and withholding spending in hazard-prone areas.

Unincorporated Yolo County Available Financial Tools and Resources

Financial Resources	YOA	WLD	DAV	WSAC	WIN	YDH
Community Development Block Grants	√	√	√	√	√*	
Capital improvements project funding	√	√	√	√	√	
Authority to levy taxes for specific purposes	√	√	√	√	√**	
Fees for water, sewer, gas, or electric service	√	√	√	√	√	
Impact fees for homebuyers or developers for new developments/homes	√	√	√	√	√	
Incur debt through general obligation bonds	√	√	√	√	√**	
Incur debt through special tax and revenue bonds	√	√	√	√	√**	
Incur debt through private activity bonds	√	√	√	√	√**	
Withhold spending in hazard-prone areas	√	√	√	√	√	

* Subject to grant from State
** Subject to voter approval

Source: Steering Committee

3.1.4 COMMUNITY OUTREACH

Yolo County also participates in the 2-1-1 Community Information program – *2-1-1 Yolo*. This is an online community information database that is available to Yolo County citizens and agencies, and provides a vast amount of information on topics that support and enhance the quality of life. The *2-1-1 Yolo* program can also be used as a referral service during periods of emergency, as well as a supplemental conduit for the release of disaster preparedness information and assistance to impacted communities.

The Yolo County Comprehensive Economic Development Strategy Committee meets regularly and works with the cities, county, state, utilities, existing businesses, financial institutions, and other interested parties to ensure that economic development programs are meeting community goals. The committee works to create job opportunities and to increase the bottom line for businesses through development and retention assistance. The committee could be an important partner in outreach efforts to educate businesses about mitigation and emergency preparedness and in economic recovery planning.

3.2 FUTURE DEVELOPMENT TRENDS

According to SACOG projections, the population of unincorporated Yolo County is anticipated to grow by an average of 1.2 percent annually while the overall County population is projected to grow at an average annual rate of 1.8 percent. The table **Population Projections** shows the county's overall population growth from 2005 to 2015. Growth in the unincorporated County is not expected to occur evenly across communities, with higher growth rates projected for Dunnigan and Knight's Landing as compared to Clarksburg, Madison, and Esparto.

Tourism is an increasing component of the Yolo County economy, and promoting its continued growth is a high priority. Further, since many of the county's best rural tourism opportunities are in the unincorporated area, and many are in public ownership (e.g. BLM, County Parks, other open space), the county should work closely with both public and private landowners and operators to ensure expanded tourism opportunities.

One of the future goals is to emphasize the revitalization of Yolo County small downtowns as a key economic development activity. This includes improving local retail and services in Esparto, Knights Landing, Madison, and other communities. It also includes ensuring that the proposed Dunnigan Hills project develops with a healthy mix of jobs, housing and other community amenities for balanced growth. These initiatives rely on the support of several grant programs to help with providing public facilities, infrastructure, and affordable housing and will need increased mitigation in the area of public outreach. A new park and aquatic center is being planned for Esparto in 2019.

Because of recent economic and technology shifts, there is now a window of opportunity to revitalize many of the Yolo County unincorporated communities. Older, boarded up commercial buildings have a chance to be commercially viable, and each downtown has the opportunity to serve its local population. Esparto, for instance, has seen the approval of 500 new housing units since 2001 and is benefiting from the local spending power the new residents bring. Even so, millions of dollars are being spent by Esparto residents in Woodland and Vacaville, where they work. Esparto also has an active community-led revitalization program, which will help the community capture some of that leakage. Like Esparto, Capay and Brooks also have limited commercial development potential, driven by Casino expansion efforts.

Clarksburg has the renovated Old Sugar Mill and the increased visitation that its attraction is bringing. Dunnigan has newer truck stops and gas stations, and is slated for an entire new town of up to 7,500 homes. Madison, the Highway 5 communities of Yolo and Zamora, and Knights Landing have some potential as their populations and highway traffic expand.

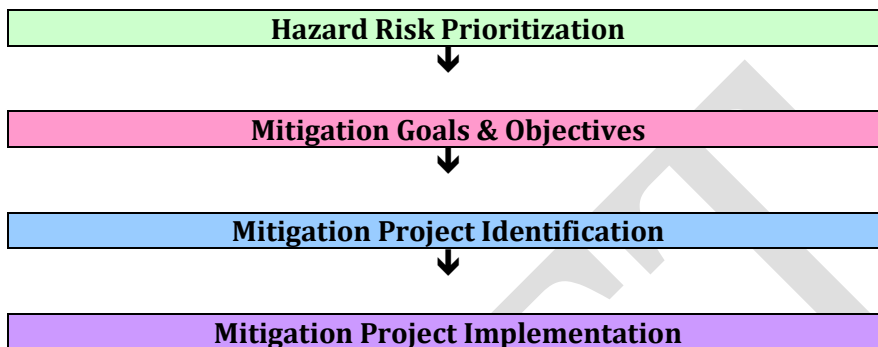
The retail and service markets in most downtowns are primarily local, and only small retail and office uses are likely to be supportable. Because of limited markets, the larger downtown parcels and vacant buildings cannot easily support a single use; so mixed-use zoning makes sense for added flexibility. Those downtowns along I-5 can also benefit from maximizing highway commercial development.

Effective revitalization depends on adequate water, sewer, roads, fire and public safety. The infrastructure systems of these communities must also be upgraded as an important component of

revitalization.

3.3 MITIGATION GOALS

The information developed for the risk assessment was used as the primary basis for developing mitigation goals and objectives. Mitigation goals are defined as general guidelines explaining what each jurisdiction wants to achieve in terms of hazard and loss prevention.



Goal statements are typically long-range, policy-oriented statements representing jurisdiction-wide visions. Objectives are statements that detail how each jurisdiction’s goals will be achieved, and typically define strategies or implementation steps to attain identified goals. Other important inputs to the development of jurisdiction-level goals and objectives include performing reviews of existing local plans, policy documents, and regulations for consistency and complementary goals, as well as soliciting input from the public.

The following represents overarching strategic goals associated with the identification and eventual implementation of appropriate and meaningful hazard mitigation efforts in relation to prioritized hazards and threats confronting the Yolo Operational Area. These goals form the basis for specific supporting process objectives and are shown from the highest priority, at the top of the list, to those of lesser importance.

The establishment of hazard mitigation goals represents both individual and collective strategies that have been mutually agreed upon by the Steering Committee, and have not changed with the 2018 HMP update. Eventually, these goals will be adopted by each participating jurisdiction and public agency as the guiding policy behind local hazard mitigation efforts, in conjunction with other associated principles.

Goal 1:	Protection of life during and after the occurrence of disasters from identified hazards;
Goal 2:	Preventing loss of life and reducing the impact of damage where problems cannot be eliminated
Goal 3:	Protection of emergency response capability

Goal 4:	Protection of developed property, homes and businesses, industry, educational opportunities and the cultural fabric by combining hazard loss reduction with the community's environmental, social and economic needs
Goal 5:	Promoting public awareness of community hazards and mitigation measures and encouraging public participation in the planning objectives
Goal 6:	Preserving or restoring natural mitigation values such as flood plains.
Goal 7:	Protection of natural resources and the environment.

Planning Process Objectives

The following objectives are meant to serve as a metric upon which the Yolo Operational Area Hazard Mitigation Plan can be evaluated. Meeting these objectives assures the Multi Hazard Mitigation Plan as a functional document that identifies short-and long-term strategies, and describes each measure including:

Objective 1:	Identification of individuals, agencies or organizations responsible for project implementation.
Objective 2:	Projecting a realistic and doable time frame for project implementation.
Objective 3:	Explanation of how the project will be financed including the conditions for financing and implementation as information is available.
Objective 4:	Identification of alternative measures, should financing not be available.
Objective 5:	Maintain consistent support for the implementation of existing hazard mitigation planning goals and objectives for the operational area.
Objective 6:	Base mitigation strategies on hazards as identified within the Yolo OA Risk Assessment.
Objective 7:	Provide significant potential for the effective reduction of damage to public and/or private property, or to costs associated with local, state, and federal recovery from future potential impacts.
Objective 8:	Establish and maintain a benchmark for identifying the most practical, cost effective, socially acceptable, and environmentally sound mitigation solution after consideration of available alternatives.
Objective 9:	Address a repetitive problem, or one that has the potential to have a major impact on an area, reducing the potential for loss of life, loss of essential services and personal property, damage to critical facilities, economic loss, hardship or human suffering.

Objective 10:	Meet applicable permit requirements.
Objective 11:	Develop mitigation standards for development in hazardous areas.
Objective 12:	Contribute to both the short-and long-term solution to the hazard vulnerability risk problem.
Objective 13:	Assuring the benefits of a mitigation measure is equal to or exceeds the cost of implementation.
Objective 14:	Have manageable maintenance and modification costs.
Objective 15:	When feasible, be designed to accomplish multiple objectives including improvement of life safety, damage reduction, restoration of essential services, protection of critical infrastructure, security of economic development, recovery, and environmental sustainability.
Objective 16:	Whenever feasible, use existing resources, agencies and programs to implement the project.
Objective 17:	Include regional hazard mitigation concerns and strategies

3.4 MITIGATION PROJECTS

The following mitigation projects were identified based on the hazard vulnerability and risk analysis for the unincorporated County:

MITIGATION PROJECTS					
Mitigation Project	Jurisdiction/ Responsible Agency	New/ Existing or Completed/ Deleted	Estimated Cost and Potential Funding Source	Timeframe of Completion	Comments/ Progress
ALL HAZARDS					
All Hazards Public Awareness and Disaster Preparedness	All / Yolo County Office of Emergency Services (OES)	Existing (2005)	Yolo County OES General Fund	Ongoing	Important element of CRS program
Convene Local/Tribal Disaster Councils	All / Yolo County OES	Existing (2013)	Yolo County OES General Fund	2020	Disaster Councils are being joined into one OA Coordinating Group

MITIGATION PROJECTS					
Mitigation Project	Jurisdiction/ Responsible Agency	New/ Existing or Completed/ Deleted	Estimated Cost and Potential Funding Source	Timeframe of Completion	Comments/ Progress
Integrate Local Hazard Mitigation Plan into Safety Element of General Plan	Yolo County and the Cities of Davis, West Sacramento, Winters, and Woodland / Yolo County OES	Existing (2013)	Yolo County OES General Fund	Ongoing	Ongoing
Community Warning System	All / Yolo County OES	COMPLETE D (2005)	Yolo County OES General Fund	Completed	These systems are continually updated due to changing technology
Care and Shelter Planning to include People with Disabilities, the Elderly, Access and Functional Needs, and Animals	All / Yolo County Health and Human Services Agency (HHSA)	Existing (2013)	Yolo County OES General Fund	Ongoing	Rapidly changing planning effort due to evolving best practices
Develop Public Health and Mass Care Tiered Response System Countywide	All / Yolo County HHSA	DELETED (2013)	DELETED	Deleted	Major advance in capability within medical and human services communities to meet needs of Yolo County residents
2018 Yolo County Hazard Mitigation Plan Update	All / Yolo County OES	NEW (2016)	PDM, HMGP	2018	Five-year required update

MITIGATION PROJECTS					
Mitigation Project	Jurisdiction/ Responsible Agency	New/ Existing or Completed/ Deleted	Estimated Cost and Potential Funding Source	Timeframe of Completion	Comments/ Progress
Structural Retrofit of Madison Fire Station	Yolo County / Madison Community Services District	NEW (2017)	PDM, HMGP	2018	Ongoing
Emergency Generator – District Office	Yolo County / RD108	NEW (2017)	\$70,000 PDM, HMGP	2020	Design Initiated
DROUGHT					
Drought Contingency Plan	All / Yolo County OES	Existing (2013)	PDM, HMGP	2018	Ongoing
Drought Mitigation Plan	All / Yolo County OES	NEW (2017)	PDM, HMGP	2018	Includes effects of climate change
Cacheville Well Replacement	Yolo County / Cacheville Community Services District	NEW (2017)	PDM, HMGP	2018	Serves the town of Yolo, affected by climate change
Groundwater Wells	Yolo County / RD108	NEW (2017)	\$1M USBR, PDM, HMGP	2019	Study initiated
FLOODING/DROUGHT					
Forbes Ranch Regulating Pond	Forbes Ranch Regulating Pond	Forbes Ranch Regulating Pond	Forbes Ranch Regulating Pond	Forbes Ranch Regulating Pond	Forbes Ranch Regulating Pond
North Winters Retention Pond	North Winters Retention Pond	North Winters Retention Pond	North Winters Retention Pond	North Winters Retention Pond	North Winters Retention Pond
EARTHQUAKE					
Non-Structural Mitigation Outreach Program	All / Yolo County Community Services Department	Existing (2013)	Yolo County OES General Fund	Ongoing	Ongoing

MITIGATION PROJECTS					
Mitigation Project	Jurisdiction/ Responsible Agency	New/ Existing or Completed/ Deleted	Estimated Cost and Potential Funding Source	Timeframe of Completion	Comments/ Progress
FLOODING/LEVEE FAILURE					
Cache Creek Flooding	Woodland / Public Works Division, Yolo County / Yolo County OES	Existing (2005)	DWR Grants	Ongoing	Ongoing
Flood Response Planning Project to Include GIS Mapping	Yolo County / Yolo County OES, West Sacramento / Public Works Department	Completed (2013)	DWR Grants	Completed	Completed
Promote Flood Insurance (Cont'd participation in the NFIP)	Yolo County and the Cities of Davis, West Sacramento, Winters, Woodland / Yolo County OES	Existing (2013)	Yolo County OES General Fund	Ongoing	Ongoing
Madison Housing Elevation	Yolo County / Yolo County OES	NEW (2017)	FMA, HMGP	2019	Elevate all houses in Madison (147) out of 100-year floodplain
Madison Stormwater Management	Yolo County / Yolo County OES	NEW (2017)	PDM, HMGP	2019	Conduct a study to determine how water can be stored/ rerouted to prevent Madison flooding
Stabilization of Sacramento River Levee Toe	Yolo County / RD 827	NEW (2017)	PDM, HMGP	Ongoing	Ongoing

MITIGATION PROJECTS					
Mitigation Project	Jurisdiction/ Responsible Agency	New/ Existing or Completed/ Deleted	Estimated Cost and Potential Funding Source	Timeframe of Completion	Comments/ Progress
East Bypass Levee Hardening and Armoring of Pump Plant	Yolo County / RD 827	NEW (2017)	PDM, HMGP	Ongoing	Ongoing
Backup Generator	Yolo County / RD 900	NEW (2017)	HMGP	2020	Timeframe dependent upon HMGP grant award
Hardening of Blacker Canal Bank	Yolo County / RD 900	NEW (2017)	HMGP	2021	Timeframe dependent upon HMGP grant award
SCADA Implementation	Yolo County / RD 900	NEW (2017)	HMGP	2020	Timeframe dependent upon HMGP grant award
Hardening of Bridgeway Lakes Drainage Canal	Yolo County / RD 900	NEW (2017)	HMGP	2018	Timeframe dependent upon HMGP grant award
Stabilization of Sacramento River Levee Toe	Yolo County / RD 1600	NEW (2017)	PDM, HMGP	Ongoing	Ongoing
Hardening of Sacramento River Levee	Yolo County / RD 1600	NEW (2017)	PDM, HMGP	Ongoing	Ongoing
Armoring of East Bypass Levee	Yolo County / RD 1600	NEW (2017)	PDM, HMGP	Ongoing	Ongoing
Hardening of Cross Levee	Yolo County / RD 2035	NEW (2017)	PDM, HMGP	\$250,000	Ongoing
Siphon Upgrade	Yolo County / RD2035	NEW (2017)	PDM, HMGP	2018	
Emergency Generator – Pump Stations	Yolo County / RD108	NEW (2017)	\$70,000 PDM, HMGP	2020	Design Initiated
Stabilization of Colusa Basin Drain Levee	Yolo County / RD108	NEW (2017)	\$3M DWR grant PDM, HMGP	2022	Problem identification
Hardening of Bridgeway Lakes Drainage Canal	Yolo County / RD 900	NEW (2017)	HMGP	2018	Timeframe dependent upon HMGP grant award

MITIGATION PROJECTS					
Mitigation Project	Jurisdiction/ Responsible Agency	New/ Existing or Completed/ Deleted	Estimated Cost and Potential Funding Source	Timeframe of Completion	Comments/ Progress
Seepage Mitigation of Sacramento River Levee	Yolo County / RD108 – Sacramento River West Side Levee District	NEW (2017)	\$8M DWR grant, local cost share PDM, HMGP	2019	Design and Permitting initiated
Hardening of Sacramento River Levee	Yolo County / RD108- Sacramento River West Side Levee District	NEW (2017)	\$5M DWR grant PDM, HMGP	2022	Problem identification
Hardening of Knights Landing Ridge Cut Levee	Yolo County / RD108 – Knights Landing Ridge Drainage District	NEW (2017)	\$3M DWR grant PDM, HMGP	2022	Problem identification
Hardening of Colusa Basin Drain Levee	Yolo County / RD 108	NEW (2017)	\$1M DWR grant PDM, HMGP	2023	Problem identification
Invasive Species Removal in Canals	Yolo County / RD108	NEW (2017)	\$100,000 PDM, HMGP	Ongoing	Ongoing
Flood Basin Segmentation	Yolo County / RD108 – Knights Landing Ridge Drainage District	NEW (2017)	\$10M DWR grant PDM, HMGP	2022	Study initiated
West Adams Canal Road and Cache Creek Bank Erosion Emergency Repair Project	Yolo County/ YCFCWCD	COMPLETE D (2017)	\$250,000 CDAA/FEMA Funding and YCFCWCD Capital Job Funding	June 2017	
RD 537 Pump Station Upgrades	City of West Sacramento / Yolo County / RD 537	New	\$2.2 million HMGP	2023	
DAM FAILURE					
Indian Valley Dam Upgrades	Yolo County (YCFCWCD)	NEW (2017)	PDM, HMGP		

MITIGATION PROJECTS					
Mitigation Project	Jurisdiction/ Responsible Agency	New/ Existing or Completed/ Deleted	Estimated Cost and Potential Funding Source	Timeframe of Completion	Comments/ Progress
Capay Valley Diversion Dam (West Adam and Winters Headworks) Upgrades	Yolo County / YCFCWCD	EXISTING (2018)	YCFCWCD Capital Job Funding	October 2018	Ongoing
SEVERE WEATHER					
Emergency Power	Yolo County and the Cities of Davis, West Sacramento, Winters, Woodland / Yolo County OES	Existing (2005)	PDM, HMGP	Ongoing	Ongoing
Winter Weather Preparedness Campaign	All / Yolo County OES	Existing (2013)	Yolo County OES General Fund	Ongoing	Ongoing
WILDFIRE					
Fuel Reduction in Local Responsibility Areas	All / Yolo County OES	Existing (2013)	CalFire Grants, Fire Safe Council Grants, HMGP	Ongoing	Ongoing
State Route 128 Fire Prevention	Winters / Fire Department, Yolo County / OES	NEW (2017)	CalFire Fire Prevention Grant, PDM, HMGP	2018	Working with CalTrans and CalFIRE to reduce vegetative fuels
Wildfire Mitigation Plan	All / Yolo County OES	NEW (2017)	PDM, HMGP	2018	Includes effects of climate change
Indian Valley Dam Power Pole Upgrade	Yolo County / YCFCWCD	NEW (2018)	PDM, HMGP	Ongoing	Ongoing

MITIGATION PROJECTS					
Mitigation Project	Jurisdiction/ Responsible Agency	New/ Existing or Completed/ Deleted	Estimated Cost and Potential Funding Source	Timeframe of Completion	Comments/ Progress
CLIMATE CHANGE					
Farmer Outreach Program to Reduce Fossil Fuel Consumption	Yolo County / Department of Agriculture	Existing (2011)	U. S. Department of Energy; Environmental Protection Agency, Housing and Urban Development, California Energy Commission, California Infrastructure and Economic Development Bank, Sacramento Area Council of Governments, Pacific Gas & Electric, Yolo County Water Districts, Water Resources Association of Yolo County, Yolo-Solano Air Quality Management District	2020-2030	Create an outreach program to inform Yolo farmers about ways to reduce nitrogen fertilizer application with minimal effects on crop yield; promote fuel efficient farm equipment and operations

MITIGATION PROJECTS					
Mitigation Project	Jurisdiction/ Responsible Agency	New/ Existing or Completed/ Deleted	Estimated Cost and Potential Funding Source	Timeframe of Completion	Comments/ Progress
Farmer Outreach Program to Reduce Greenhouse Gas Emissions	Yolo County / Department of Agriculture	Existing (2011)	U. S. Department of Energy, Environmental Protection Agency, U.S. Department of Housing and Urban Development, California Energy Commission, California Infrastructure and Economic Development Bank, Sacramento Area Council of Governments, Pacific Gas & Electric, Yolo County Water Districts, Water Resources Association of Yolo County, Yolo-Solano Air Quality Management District	2020-2030	Create an outreach program to promote fuel efficient farm equipment and operations

MITIGATION PROJECTS					
Mitigation Project	Jurisdiction/ Responsible Agency	New/ Existing or Completed/ Deleted	Estimated Cost and Potential Funding Source	Timeframe of Completion	Comments/ Progress
Program to Reduce Energy Use in Agricultural Pumping	Yolo County / Department of Agriculture, Community Services Department	Existing (2011)	U. S. Department of Energy, Environmental Protection Agency, U.S. Department of Housing and Urban Development, California Energy Commission, California Infrastructure and Economic Development Bank, Sacramento Area Council of Governments, Pacific Gas & Electric, Yolo County Water Districts, Water Resources Association of Yolo County, Yolo-Solano Air Quality Management District	2020-2030	Waive county permit fees for projects that convert tailwater-return pumps to solar power; create an outreach and incentives program to encourage farmers to improve the efficiency of irrigation pumps.

MITIGATION PROJECTS					
Mitigation Project	Jurisdiction/ Responsible Agency	New/ Existing or Completed/ Deleted	Estimated Cost and Potential Funding Source	Timeframe of Completion	Comments/ Progress
Program to Reduce Livestock Manure Methane Emissions	Yolo County / Department of Agriculture	Existing (2011)	U. S. Department of Energy, Environmental Protection Agency, U.S. Department of Housing and Urban Development, California Energy Commission, California Infrastructure and Economic Development Bank, Sacramento Area Council of Governments, Pacific Gas & Electric, Yolo County Water Districts, Water Resources Association of Yolo County, Yolo-Solano Air Quality Management District	2020-2030	Work with livestock operators to identify funding assistance for the implementation of methane biogas control systems and related renewable energy generation systems

MITIGATION PROJECTS					
Mitigation Project	Jurisdiction/ Responsible Agency	New/ Existing or Completed/ Deleted	Estimated Cost and Potential Funding Source	Timeframe of Completion	Comments/ Progress
Program to Reduce Methyl Bromide Application	Yolo County / Department of Agriculture, Community Services Department	Existing (2011)	U. S. Department of Energy, Environmental Protection Agency, U.S. Department of Housing and Urban Development, California Energy Commission, California Infrastructure and Economic Development Bank, Sacramento Area Council of Governments, Pacific Gas & Electric, Yolo County Water Districts, Water Resources Association of Yolo County, Yolo-Solano Air Quality Management District	2020-2030	Phase-out methyl bromide in pesticide applications

MITIGATION PROJECTS					
Mitigation Project	Jurisdiction/ Responsible Agency	New/ Existing or Completed/ Deleted	Estimated Cost and Potential Funding Source	Timeframe of Completion	Comments/ Progress
Program to Sequester Carbon in Agricultural Landscapes	Yolo County / Department of Agriculture, Community Services Department	Existing (2011)	U. S. Department of Energy, Environmental Protection Agency, U.S. Department of Housing and Urban Development, California Energy Commission, California Infrastructure and Economic Development Bank, Sacramento Area Council of Governments, Pacific Gas & Electric, Yolo County Water Districts, Water Resources Association of Yolo County, Yolo-Solano Air Quality Management District	2020-2030	Create a program to restore riparian woodlands in locations consistent with the Yolo Natural Heritage Program to offset expected development emissions; create a program to allow developers to pay fees to the Resource Conservation District to help it implement its on-farm conservation practices program; develop a system for tracking the establishment of new orchards in in the County using GIS

MITIGATION PROJECTS					
Mitigation Project	Jurisdiction/ Responsible Agency	New/ Existing or Completed/ Deleted	Estimated Cost and Potential Funding Source	Timeframe of Completion	Comments/ Progress
Program to Reduce Vehicle Miles Traveled	Yolo County/ Community Services Department	Existing (2011)	U. S. Department of Energy, Environmental Protection Agency, U.S. Department of Housing and Urban Development, California Energy Commission, California Infrastructure and Economic Development Bank, Sacramento Area Council of Governments, Pacific Gas & Electric, Yolo County Water Districts, Water Resources Association of Yolo County, Yolo-Solano Air Quality Management District	2020-2030	Achieve Vehicle Miles Traveled performance standards identified in the 2030 Yolo County General Plan; implement Transportatio n Study Impact Guidelines

MITIGATION PROJECTS					
Mitigation Project	Jurisdiction/ Responsible Agency	New/ Existing or Completed/ Deleted	Estimated Cost and Potential Funding Source	Timeframe of Completion	Comments/ Progress
Community Choice Aggregation (CCA) Program	Yolo County / County Administrator Office	Existing (2011)	U. S. Department of Energy, Environmental Protection Agency, U.S. Department of Housing and Urban Development, California Energy Commission, California Infrastructure and Economic Development Bank, Sacramento Area Council of Governments, Pacific Gas & Electric, Yolo County Water Districts, Water Resources Association of Yolo County, Yolo-Solano Air Quality Management District	2012-2030	Develop a CCA Program that will help prioritize the development of local energy projects

MITIGATION PROJECTS					
Mitigation Project	Jurisdiction/ Responsible Agency	New/ Existing or Completed/ Deleted	Estimated Cost and Potential Funding Source	Timeframe of Completion	Comments/ Progress
Program to Reduce Energy Consumption in Existing Residential and Non-Residential Units	Yolo County / Community Services Department	Existing (2011)	U. S. Department of Energy, Environmental Protection Agency, U.S. Department of Housing and Urban Development, California Energy Commission, California Infrastructure and Economic Development Bank, Sacramento Area Council of Governments, Pacific Gas & Electric, Yolo County Water Districts, Water Resources Association of Yolo County, Yolo-Solano Air Quality Management District	2020-2030	Promote incentive and technical assistance programs (Energy Upgrade California Program, Yolo Energy Watch); implement the Property-Assessed-Clean-Energy (PACE) Program; amend the Yolo County Code to improve overall energy efficiency by 15%; increase participation by eligible low-income residents in the Department of Energy Weather Assistance Program and the Low-Income Home Energy Assistance Program

MITIGATION PROJECTS					
Mitigation Project	Jurisdiction/ Responsible Agency	New/ Existing or Completed/ Deleted	Estimated Cost and Potential Funding Source	Timeframe of Completion	Comments/ Progress
Program to Reduce Energy Consumption in New Residential and Non-Residential Units	Yolo County / Community Services Department	Existing (2011)	U. S. Department of Energy, Environmental Protection Agency, U.S. Department of Housing and Urban Development, California Energy Commission, California Infrastructure and Economic Development Bank, Sacramento Area Council of Governments, Pacific Gas & Electric, Yolo County Water Districts, Water Resources Association of Yolo County, Yolo-Solano Air Quality Management District	2012-2030	Amend the Yolo County Code to require all new residential construction exceed the California Energy Code 2008 Energy Efficiency Standards by 15% (all new homes over 3,500 square feet of livable space by 30%); amend the Yolo County Code to require all new non-residential construction exceed the California Energy Code 2008 Energy Efficiency Standards by 15% beginning in 2013; create an incentive program for commercial builders to exceed the California Energy Code Energy Efficiency Standards by 30% or more

MITIGATION PROJECTS					
Mitigation Project	Jurisdiction/ Responsible Agency	New/ Existing or Completed/ Deleted	Estimated Cost and Potential Funding Source	Timeframe of Completion	Comments/ Progress
Program to Increase On-Site Renewable Energy Generation to Reduce Demand for Grid Energy	Yolo County / Community Services Department	Existing (2011)	U. S. Department of Energy, Environmental Protection Agency, U.S. Department of Housing and Urban Development, California Energy Commission, California Infrastructure and Economic Development Bank, Sacramento Area Council of Governments, Pacific Gas & Electric, Yolo County Water Districts, Water Resources Association of Yolo County, Yolo-Solano Air Quality Management District	2012-2030	Develop an outreach program to promote the Energy Upgrade California Program for residents; implement the PACE Program; develop an outreach program to promote financial incentives through the California Solar Initiative (CSI) for installing hot water heaters; amend the Yolo County Code to require all new residential and commercial development to install solar hot water systems; amend the Yolo County Code to require all new residential development of four units or more and non-residential development to install solar photovoltaic systems capable of providing 10% or more of the development's total projected electricity consumption

MITIGATION PROJECTS					
Mitigation Project	Jurisdiction/ Responsible Agency	New/ Existing or Completed/ Deleted	Estimated Cost and Potential Funding Source	Timeframe of Completion	Comments/ Progress
Program to Promote On-Farm Renewable Energy Facilities	Yolo County / Community Services Department	Existing (2011)	U. S. Department of Energy, Environmental Protection Agency, U.S. Department of Housing and Urban Development, California Energy Commission, California Infrastructure and Economic Development Bank, Sacramento Area Council of Governments, Pacific Gas & Electric, Yolo County Water Districts, Water Resources Association of Yolo County, Yolo-Solano Air Quality Management District	2012-2030	Develop a farmer-to-farmer workshop program to promote on-farm renewable energy generation; identify funding sources to finance investments in renewable energy for agricultural operations

MITIGATION PROJECTS					
Mitigation Project	Jurisdiction/ Responsible Agency	New/ Existing or Completed/ Deleted	Estimated Cost and Potential Funding Source	Timeframe of Completion	Comments/ Progress
Program to Reduce Water Consumption in Existing Buildings through Increased Plumbing Fixture Efficiency	Yolo County / Community Services Department	Existing (2011)	U. S. Department of Energy, Environmental Protection Agency, U.S. Department of Housing and Urban Development, California Energy Commission, California Infrastructure and Economic Development Bank, Sacramento Area Council of Governments, Pacific Gas & Electric, Yolo County Water Districts, Water Resources Association of Yolo County, Yolo-Solano Air Quality Management District	2020-2030	Amend the Yolo County Code to require all residences built before 1994 to be retrofitted with water efficient fixtures prior to resale; develop a program to promote voluntary water efficiency retrofits for existing buildings

MITIGATION PROJECTS					
Mitigation Project	Jurisdiction/ Responsible Agency	New/ Existing or Completed/ Deleted	Estimated Cost and Potential Funding Source	Timeframe of Completion	Comments/ Progress
Program to Promote Weather-Based Irrigation Systems and Water Efficient Turf Management	Yolo County / Community Services Department	Existing (2011)	U. S. Department of Energy, Environmental Protection Agency, U.S. Department of Housing and Urban Development, California Energy Commission, California Infrastructure and Economic Development Bank, Sacramento Area Council of Governments, Pacific Gas & Electric, Yolo County Water Districts, Water Resources Association of Yolo County, Yolo-Solano Air Quality Management District	2012-2030	Require all automatic irrigation system controllers be weather based; amend the Yolo County Code to limit turf to no more than 25% of the front yard in new residential development

MITIGATION PROJECTS					
Mitigation Project	Jurisdiction/ Responsible Agency	New/ Existing or Completed/ Deleted	Estimated Cost and Potential Funding Source	Timeframe of Completion	Comments/ Progress
Program to Expand Landfill Methane Capture Systems	Yolo County / Community Services Department	Existing (2011)	U. S. Department of Energy, Environmental Protection Agency, U.S. Department of Housing and Urban Development, California Energy Commission, California Infrastructure and Economic Development Bank, Sacramento Area Council of Governments, Pacific Gas & Electric, Yolo County Water Districts, Water Resources Association of Yolo County, Yolo-Solano Air Quality Management District	2020	Enhance and expand existing landfill gas collection and destruction systems (90% control efficiency) at the Yolo County Central Landfill

MITIGATION PROJECTS					
Mitigation Project	Jurisdiction/ Responsible Agency	New/ Existing or Completed/ Deleted	Estimated Cost and Potential Funding Source	Timeframe of Completion	Comments/ Progress
Program to Prepare for the Effects of Climate Change on Agriculture	Yolo County / Community Services Department	Existing (2011)	U. S. Department of Energy, Environmental Protection Agency, U.S. Department of Housing and Urban Development, California Energy Commission, California Infrastructure and Economic Development Bank, Sacramento Area Council of Governments, Pacific Gas & Electric, Yolo County Water Districts, Water Resources Association of Yolo County, Yolo-Solano Air Quality Management District	2015	Develop outreach programs to inform and assist farmers in changing crop patterns and/or practices to adapt to the effects of climate change; develop a program to monitor and summarize relevant studies pertinent to climate change effects on agriculture and potential adaptation strategies

MITIGATION PROJECTS					
Mitigation Project	Jurisdiction/ Responsible Agency	New/ Existing or Completed/ Deleted	Estimated Cost and Potential Funding Source	Timeframe of Completion	Comments/ Progress
Program to Prepare for Climate Change Effects on Water Resources	Yolo County / County Administrator Office, Community Services Department	Existing (2011)	U. S. Department of Energy, Environmental Protection Agency, U.S. Department of Housing and Urban Development, California Energy Commission, California Infrastructure and Economic Development Bank, Sacramento Area Council of Governments, Pacific Gas & Electric, Yolo County Water Districts, Water Resources Association of Yolo County, Yolo-Solano Air Quality Management District	2015	Work with the Water Resources Association of Yolo County to update the Integrated Regional Water Resource Management Plan to monitor and respond to climate change effects on water resources

MITIGATION PROJECTS					
Mitigation Project	Jurisdiction/ Responsible Agency	New/ Existing or Completed/ Deleted	Estimated Cost and Potential Funding Source	Timeframe of Completion	Comments/ Progress
Program to Respond to the Potential Threat of Sea-Level Rise	Yolo County / Office of Emergency Services / Community Services Department	Existing (2011)	U. S. Department of Energy, Environmental Protection Agency, U.S. Department of Housing and Urban Development, California Energy Commission, California Infrastructure and Economic Development Bank, Sacramento Area Council of Governments, Pacific Gas & Electric, Yolo County Water Districts, Water Resources Association of Yolo County, Yolo-Solano Air Quality Management District	2015	Coordinate with FEMA and DWR to ensure that the flood mapping for potentially affected areas is regularly updated to reflect changes in Base Flood Elevations accounting for sea level rise; expand outreach under the Community Rating System to inform residents of potentially affected areas regarding the need to plan for sea-level rise; identify areas that will be affected by sea-level rise and institute protection and adaption measures; revise capital improvement plants for critical infrastructure (including levees and roads) in potentially affected areas to address the effects of future sea level rise

MITIGATION PROJECTS					
Mitigation Project	Jurisdiction/ Responsible Agency	New/ Existing or Completed/ Deleted	Estimated Cost and Potential Funding Source	Timeframe of Completion	Comments/ Progress
Program to Protect the Public from Increased Health Risks	Yolo County / OES, HHSA	Existing (2011)	U. S. Department of Energy, Environmental Protection Agency, U.S. Department of Housing and Urban Development, California Energy Commission, California Infrastructure and Economic Development Bank, Sacramento Area Council of Governments, Pacific Gas & Electric, Yolo County Water Districts, Water Resources Association of Yolo County, Yolo-Solano Air Quality Management District	2014	Update the Yolo County Hazard Mitigation Plan to address public health risks associated with climate change

MITIGATION PROJECTS					
Mitigation Project	Jurisdiction/ Responsible Agency	New/ Existing or Completed/ Deleted	Estimated Cost and Potential Funding Source	Timeframe of Completion	Comments/ Progress
Program to Develop Governance Strategies to Ensure that Yolo County Remains Resilient to Climate Change	Yolo County/ OES, Community Services Department	Existing (2011)	U. S. Department of Energy, Environmental Protection Agency, U.S. Department of Housing and Urban Development, California Energy Commission, California Infrastructure and Economic Development Bank, Sacramento Area Council of Governments, Pacific Gas & Electric, Yolo County Water Districts, Water Resources Association of Yolo County, Yolo-Solano Air Quality Management District	2013-2014	Provide updates to the Board of Supervisors on climate change adaptation science, policy, and legislation; update the Yolo County Hazard Mitigation Plan with an emphasis on climate change related effects and risks to Yolo County; consult and coordinate with applicable agencies regarding development of climate adaptation priorities; collaborate with UC Davis on regional climate data monitoring and risk modeling

SECTION 4.0: PLAN REVIEW, EVALUATION AND IMPLEMENTATION

The strategies presented are deemed appropriate and effective by recommendation of the County of Yolo.

4.1 PLAN ADOPTION

Upon submission to the California Office of Emergency Services (CalOES) for review, and subsequent approval by the Federal Emergency Management Agency (FEMA), the Yolo County Hazard Mitigation Plan will be presented to local government for formal adoption. As appropriate, the adopted plan and accompanying Yolo County Unincorporated Area Community Profile will then be incorporated into local general plans for integration into organizational policy.

4.2 PLAN MONITORING

The process of hazard mitigation does not end with the completion, approval, and adoption of the Yolo County Hazard Mitigation Plan and the Yolo County Unincorporated Area Community Profile. Within the lifespan of these documents (five years), local government along with community-based organizations will ensure that the mitigation goals and strategies identified are monitored, that plan administration will continue under a collaborative and cooperative umbrella, and that the document itself will be properly maintained.

The Yolo County Office of Emergency Services, as lead coordination agency for hazard mitigation planning within the Yolo OA, and will assist and support the ongoing collaborative efforts of Yolo County, through the established Hazard Mitigation Steering Committee. Specific plan maintenance activities by the Yolo County Office of Emergency Services and Yolo County may include:

- Distribution of the HMP and Community Profile to all interested parties, including both written and digital formats
- Monitoring of the Yolo County mitigation project activities and dissemination of status reports
- Generation of reports relative to plan status, project management, and revision updates to executive leadership
- Preparations for plan eventual revision and updating

4.3 PLAN EVALUATION

Upon approval and adoption by the County of Yolo, the prioritized mitigation strategies will be further developed for funding and implementation by the lead agencies. The plan describes the potential sources of Hazard Mitigation Strategy funding, and general procedures to obtain that funding.

The mitigation strategies represented and adopted within this plan are recommendations only, and must be approved and funded in order to be implemented as official mitigation solutions. Ultimately, it is the responsibility of jurisdictional and agency officials within the Yolo Operational Area to undertake project implementation based upon identified mitigation strategies, funding availability, and local need when it arises. The Yolo County Office of Emergency Services will meet with the Hazard Mitigation Steering Committee to evaluate the plan after each update meeting.

4.4 PLAN UPDATE

During the five year update cycle, the Yolo County Office of Emergency Services will hold tri-annual update meetings with the Hazard Mitigation Steering Committee and local stakeholders to discuss revisions to the plan. The Yolo County Office of Emergency Services will continue to hold public meetings after the first and third update meetings annually, and will continue to invite public participation in the update process via updated public surveys.

DRAFT

APPENDIX A: ADOPTION LETTER

DRAFT

FILED

NOV 09 2018

BY Rupita Ramirez
DEPUTY CLERK OF THE BOARD

RESOLUTION NO. 18-139

**Resolution of the Board of Supervisors of the County of Yolo
Adopting the 2018 Multi-Jurisdiction Hazard Mitigation Plan Update**

WHEREAS, the Federal Disaster Mitigation Act of 2000 (DMA 2000), requires all jurisdictions to be covered by a Pre-Disaster All Hazards Mitigation Plan in order to be eligible for Federal Emergency Management Agency pre- and post-disaster mitigation grants and funding; and

WHEREAS, the County of Yolo recognizes that no jurisdiction is immune from natural, technological or human-caused hazards and recognizes the importance of enhancing its ability to withstand hazards as well as the importance of reducing human suffering, property damage, interruption of public services and economic losses caused by those hazards; and

WHEREAS, County of Yolo staff lead the collaborative effort, involving various local and tribal government jurisdictions, public authorities, special districts, and selected community-based organizations that represent a broad composite of the Yolo County operational area to form a diverse team to update their Multi-Jurisdiction Hazard Mitigation Plan, soliciting input from stakeholders, local agencies, and the public at large; and

WHEREAS, the Yolo County Multi-Jurisdiction Hazard Mitigation Plan Update focuses on potential impacts of natural hazards, and includes an assessment of these natural hazards, a plan to mitigate them, and methods of monitoring, evaluating, and updating the Plan at least once every five years; and

WHEREAS, the United States Department of Homeland Security, Federal Emergency Management Agency (FEMA) has approved the Multi-Jurisdiction Hazard Mitigation Plan; and

WHEREAS, the 2018 Yolo County Multi-Jurisdiction Hazard Mitigation Plan shall be adopted into the Safety Element of the Yolo County General Plan to meet the provisions of Government Code 65302.6,

NOW, THEREFORE, BE IT RESOLVED by the Board of Supervisors of the County of Yolo as follows:

1. The Multi-Jurisdiction Hazard Mitigation Plan Update is hereby adopted; and
2. The Yolo County, County Administrative Officer is hereby granted authority to amend and update the Plan as necessary and/or as required by the Federal Emergency Management Agency; and
3. The Safety Element of the Yolo County General Plan be amended as described above.
4. The Clerk of the Board shall attest to the passage of this Resolution and it shall thereupon be in full force and effect.

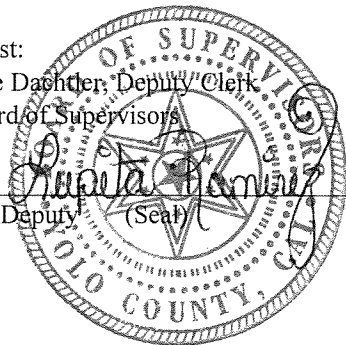
PASSED AND ADOPTED by the Board of Supervisors of the County of Yolo this 6th day of November, 2018, by the following vote:

AYES: Saylor, Rexroad, Provenza, Chamberlain, Villegas.
NOES: None.
ABSENT: None.
ABSTENTION: None.

Oscar E. Villegas
Oscar Villegas, Chair
Yolo County Board of Supervisors

Attest:
Julie Dachtler, Deputy Clerk
Board of Supervisors

By: Rupita Ramirez
Deputy Clerk
(Seal)



Approved as to Form:

Philip J. Pogledich
Philip J. Pogledich
County Counsel