



# 7

## Public Safety Updated 2024

### INTRODUCTION

Protecting the public’s health, safety, and welfare is a fundamental goal of any municipality, and this goal is a central part of Yucaipa’s mission. Yucaipa is committed to protecting its residents from natural and human-caused hazards due to geology, flooding, wildfires, severe weather, air pollution, and climate change. This Public Safety Element is designed to address the community’s safety, health, and welfare as they relate to these hazards.

Yucaipans cherish the hills, landforms, and creeks in their community. When coupled with a built environment of homes, buildings, and infrastructure systems, however, these features are also the source of hazards. Earthquake faults that flank the hills can trigger landslides. The streams and rivers that created the “benches” and canyons over time can overflow channels and lead to flooding. The grasslands covering the hills present a risk of wildland fires. Even severe weather can present safety hazards.

In light of these concerns, this Public Safety Element is intended to: 1) recognize the local hazards associated with Yucaipa’s natural environment (geology, landforms, waterways, and weather), and 2) identify methods to manage these risks and protect people, property, infrastructure, and structures from harm. As the policies and actions are implemented over the next 20 years, the City of Yucaipa will be increasingly less impacted by disasters, and in the process, become more self-reliant, sustainable, and prosperous.

#### In This Element:

- + Geology and Seismic Safety
- + Flood Safety
- + Fire Safety
- + Emergency Preparedness
- + Severe Weather
- + Noise Hazards
- + Air Quality and Climate Change



### General Plan vision themes in this element include:

An attractive, peaceful, and safe community

Health, safety, and well-being of our residents

## Purpose and Scope

The Public Safety Element is a state-mandated general plan element that is intended to identify and protect the community from risks due to natural and human-caused hazards. The element addresses the following hazards with associated goals and policies:

- + **Natural Hazards.** Natural hazards include a range of seismic and geologic hazards, flooding hazards, wildland and urban fire hazards, and severe weather, most of which are caused by inclement weather or natural events.
- + **Human-Caused Hazards.** These include air pollution, climate change, and noise hazards that are caused by human activities. Other transportation-related and public safety hazards are addressed in other elements of the general plan.
- + **Emergency Preparedness.** Emergency preparedness refers to the range of procedures, methods, and protocols the City of Yucaipa uses to prepare for emergencies and disasters, respond to them, and recover from them.

## Related Plans

Yucaipa's Public Safety Element is implemented by various plans for protecting the community. Some of these plans are provided by the City of Yucaipa; others are provided by other organizations.

- + **Drainage and Flooding.** The City's Master Plan of Drainage (MPD) provides an assessment of drainage and infrastructure needs and a plan for the maintenance and construction of detention basins to protect from flooding hazards.
- + **Fire Service Planning.** The Yucaipa Fire Department, through a contract with the California Department of Forestry and Fire Protection (CAL FIRE), prepares a fire services plan to provide fire protection and emergency medical services to the city.
- + **Local Hazard Mitigation Plan (LHMP).** Yucaipa's LHMP identifies hazards and establishes a plan to prepare for emergencies and disasters and mitigate potential impacts, developed in accordance with the Disaster Mitigation Act of 2000 and FEMA's Local Hazard Mitigation Plan guidance. The LHMP identifies and profiles hazards, analyzes the people and facilities at risk, and provides mitigation actions to reduce or eliminate hazard risk. These mitigation actions include short and long-term strategies, with planning, policy changes, programs, projects, and other activities. The link to the plan is <https://yucaipa.gov/disaster-preparedness/>
- + **Emergency Operations Plan.** The City's Emergency Operations Plan provides a comprehensive organizational and procedural guide for preparing for, responding to, and recovering from natural disasters or human-caused emergencies.

The next sections provide context for each topic, followed by goals, policies, and programs to achieve the General Plan vision.



## GEOLOGIC AND SEISMIC SAFETY

The City's location in the Yucaipa Plain, and the Crafton and Yucaipa Hills, coupled with the many streams that flow through the community, has contributed to its naturally undulating terrain. The natural forces (flooding, earthquakes, winds, etc.) responsible for Yucaipa's unique terrain also have the potential to damage structures, roads, and utility systems as well as threaten people.

### Geologic Hazards

The City rests primarily on alluvium deposited by the Yucaipa Creek and its tributaries. Older deposits consisting of alluvial fan conglomerate and other decomposed, clay-rich alluvia cover Central Yucaipa and Dunlap Acres. Younger alluvial deposits cover the river wash areas and Dunlap Acres west of Oak Glen Road. Parts of west Yucaipa are on Reservoir Canyon Hill, which is composed of crystalline rocks and older alluvium. Crafton Hills and Yucaipa Hills are composed of crystalline and metamorphic rock.

Yucaipa's geologic setting can, under certain circumstances, present hazardous conditions. These hazards are most frequently triggered by seismic or flood events.

- + **Unstable Soils.** Yucaipa's clay soils and young, relatively low-compacted soils can shrink or swell depending on moisture content. This occurs particularly during flood or earthquake. Structures on these soils may experience shifting, cracking, and breaking damage as soils shrink, subside, or expand. Unstable soils are primarily adjacent to the drainage courses.
- + **Slope Instability.** Slope failures occur most often along steep canyons, hillsides, and channels and can be triggered by flooding and earthquakes. Although Yucaipa has a low to moderate potential, landslides have occurred in Crafton Hills and in northern Yucaipa. These areas are also subject to a higher risk of mud/debris flow due to the topography.
- + **Ground Subsidence.** Ground subsidence involves the settling of ground surface due to extraction of oil, gas, or groundwater. Although Yucaipa does not have extraction fields, the Yucaipa Basin is in overdraft and thus has a low to moderate potential for ground subsidence throughout the community. Isolated cases of ground subsidence have occurred in the past.
- + **Soil Corrosiveness.** Many studies in Yucaipa have documented the presence of corrosive soils, which are those with a low pH. Corrosive soils can be responsible for premature eroding of buried metal pipes and concrete foundations. In terms of location, Yucaipa's soils can be corrosive on its adjacent hillsides, in Central Yucaipa, and portions of Dunlap Acres.



*Excessive rainfall after a fire can lead to slope instability and mud/debris flows.*



## Seismic Hazards

Yucaipa is in a seismically active region. The San Andreas Fault and San Jacinto Fault Zone accommodate up to 80% of the slip rate between the North American and Pacific plates. The San Bernardino segment of the San Andreas transects the northern portion of the community along the base of Yucaipa Ridge. The San Andreas is the dominant fault in southern California and is capable of producing an 8.0 magnitude (M) earthquake, which is also capable of threatening property and lives.

Yucaipa has surface traces of active faults capable of producing damaging earthquakes. The Chicken Hill Fault runs through west Yucaipa and parallels Oak Glen Road south of Yucaipa Boulevard. The Crafton Hills Fault runs along the southeast front of the Crafton Hills of Yucaipa. Northern Yucaipa is also transected by a series of fault lines, designated Alquist-Priolo Zones (AP zones). Among others, recent earthquakes include:

- + 2008 Chino Hills earthquake (M5.5)
- + 2005 Yucaipa earthquake (M4.9)
- + 2003 Big Bear earthquake (M5.4)
- + 2003 Yucaipa earthquake (M5.2)
- + 2001 Yucaipa earthquake (M5.1)
- + 1998 Crafton Hills earthquake (M4.5)
- + 1994 Highland earthquake (M5.0)

Seismic hazards depend on the fault, soil types, and water table. Geologic hazards in Yucaipa include:

- + **Ground Shaking.** Yucaipa is subject to severe ground shaking due to fault ruptures along many of its active faults. The most intense shaking that could damage structures is expected from the San Andreas Fault, which passes along northern Yucaipa. Additional shaking could also occur adjacent to or near the many active faults and trace faults crossing the community.
- + **Liquefaction.** Yucaipa is generally susceptible to liquefaction, which is the loss of the strength or cohesion of soil. This can occur on young, loose, unconsolidated sediments. Whereas much of the City has liquefaction concerns, the only area at high risk of liquefaction is near Mill Creek Canyon, where groundwater levels are within 50 feet of the surface.
- + **Seismically Induced Settlement.** Much of Yucaipa is underlain by young, unconsolidated alluvial deposits and artificial fill that may be susceptible to seismically induced settlement. Sparse information is available on historical occurrences. This hazardous condition is most likely to occur in the Dunlap Acres planning area, portions of the North Bench, and along creeks.



## Protecting Our Community

Protecting Yucaipa from the threat of geologic hazards is achieved through the identification of hazards, mitigation of structures at risk, enforcement of building codes and development standards, and public education and emergency preparedness.

### Hazard Identification

The City of Yucaipa has established a Geologic Hazard Overlay District in the Municipal Code for designated areas within the community where active faults, liquefaction, subsidence, and mudflows may present a threat to structures, property, and people. **Figure S-1, Geologic Hazard Overlay District**, designates the general location of potential geologic and seismic hazards in Yucaipa.

### Geotechnical Study

For building and structures proposed within the Geologic Hazards Overlay District or other areas required by the City Building Official, a geotechnical hazard study is required as part of the application. The geotechnical study must document the potential for geologic and seismic hazards in accordance with local regulations and state law. Seismic hazard mitigation measures identified by the geotechnical study, overlay district, or City Building Official must be incorporated into the project design prior to approval.

### Structures at Risk

Advances in engineering techniques and building codes have reduced the threat of seismic-related collapse in new buildings. However, buildings built before modern seismic standards are at risk — unreinforced masonry, precast concrete tilt-up walls, soft-stories, and nonductile concrete frames. Of particular concern are Yucaipa's 42 mobile home parks. Critical infrastructure (gas, water, electric lines, and aboveground water storage reservoirs) can also be damaged during an earthquake. The City is pursuing programs to upgrade facilities, infrastructure, and housing units.

### Building Codes and Development Standards

Proposed projects in the Geologic Hazards Overlay District must adhere to California building codes and state law. These codes provide minimum standards to protect property and public safety by regulating the design and construction of excavations, foundations, building frames, retaining walls, and other features to mitigate the effects of earthquakes. State law provides additional seismic safety standards for schools, hospitals, infrastructure, and critical facilities. Seismic hazard mitigation measures are included.

Adherence to the following goal and policies will help mitigate potential harm from Yucaipa's geologic and seismic hazards.



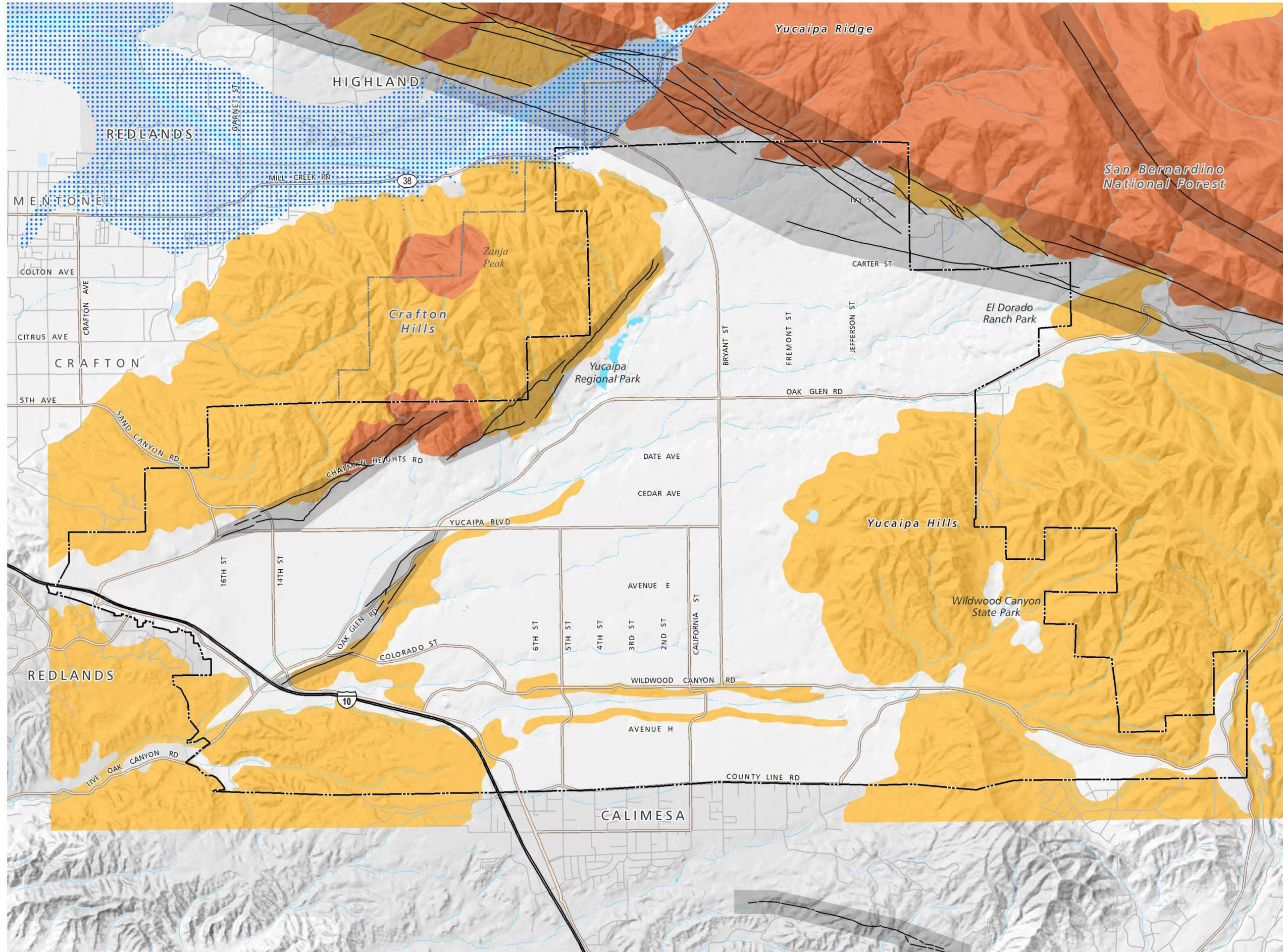
## GOAL S-1: GEOLOGIC AND SEISMIC SAFETY

Adequate protection of public health and safety; property; and economic, social, and service functions from seismic and geologic hazards.

### Policies

- S-1.1 Geologic Hazard Identification.** Maintain and continuously update the City's geologic and seismic hazards map in concert with updates from the California Geologic Survey and local surveys.
- S-1.2 Geotechnical Analysis.** In areas within the City's Geologic and Seismic Hazards Overlay District or as required by the Building Official, require development proposals to include a geotechnical hazard analysis.
- S-1.3 Alquist-Priolo Act.** Enforce development requirements, such as seismic study analyses, project siting, and project design features for proposed developments near active faults pursuant to the Alquist-Priolo Act.
- S-1.4 Building Codes.** Require adherence to the latest California Building Codes and regulations in the Geologic and Seismic Hazards Overlay District; update local codes periodically for the latest advances.
- S-1.5 City Critical Infrastructure and Facilities.** Locate, design, maintain, and upgrade critical infrastructure and facilities (police, medical facilities, fire, roads, reservoirs, etc.) to required seismic safety standards.
- S-1.6 Other Critical Infrastructure and Facilities.** Encourage Caltrans, CAL FIRE, schools, utility companies, and other relevant agencies to comply with seismic safety standards for critical infrastructure and facilities.
- S-1.7 Retrofitting Buildings.** Encourage owners of potentially hazardous buildings (e.g., mobile homes) to assess seismic vulnerability and conduct seismic retrofitting as necessary to improve resistance to earthquakes.
- S-1.8 Natural Topography.** Limit grading for future developments to the minimum amount needed to preserve Yucaipa's natural topography, preserve vegetation, and maintain soil and slope stability.
- S-1.9 Public Education and Preparedness.** Compile and distribute earthquake preparedness information to Yucaipa residents and business owners; conduct periodic inspections and preparedness events.





**Figure S-1**  
**GEOLOGIC HAZARD**  
**OVERLAY DISTRICT**

- City Limits
- Yucaipa Sphere of Influence
- Earthquake Hazard**
  - Fault Line
  - Alquist Priolo Fault Zone
- Liquefaction Susceptibility**
  - Most Susceptible
- Landslide Susceptibility**
  - Generally Susceptible
  - Most Susceptible

**Note:**  
The Geologic Hazard Overlay District shall be designated in areas which are on or adjacent to active earthquake fault traces, in areas where landslides, mudslides and subsidence are prevalent, and where liquefaction of the soil is associated with earthquake activity.



Source: California Department of Conservation 1990; City of Yucaipa 2012

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## FLOOD SAFETY

Floods are natural and recurrent events that generally do not pose a hazard in an undeveloped area; it is only when floods interact with the built environment—typically, structures built in the floodplain, where they obstruct floodwaters—that they become hazardous to property, structures, and people.

### Natural Setting

Yucaipa is bisected by several waterways. Wilson Creek runs in a southwesterly direction and Wildwood Creek runs to the southeast. Drainage occurs through many small, fluctuating creeks—Yucaipa Creek, Oak Glen Creek, Chicken Springs Wash, Spoor Creek, and Gateway Wash. Wilson and Wildwood creeks and their tributaries converge in Live Oak Canyon, west of Interstate 10, and then flow to the San Timoteo River.

Yucaipa has generally warm to dry weather and averages only 20 inches of rainfall annually. Therefore, most of the creeks are dry during most of the year, except along their upper reaches, which may have small, sustained year-round flow. However, Yucaipa is also subject to intense local storms. Floodwaters from the upper reaches of the mountains converge in Yucaipa’s waterways, creating the potential for flooding and safety hazards.

During the late 1960s, Yucaipa storms caused widespread damage to roads, homes, utilities, and property. Since then, the City has completed multimillion-dollar projects to protect the community from flooding. Although channel improvements have significantly reduced the occurrence and severity of flooding, storms continue to cause local flooding. Recent flooding events include:

- + 2011 January Flash Flood/Mudslides
- + 2010 January Flash Flood/Mudslides
- + 2005 August Flash Flood
- + 2002 November Flash Flood
- + 1999 August Flash Flood
- + 1995 January Storm
- + 1993 February Storm
- + 1992 Winter Storms

To prevent and control flooding, Yucaipa and the San Bernardino County Flood Control District manage a network of channels, detention basins, and other flood control infrastructure. More than 28 miles of drainage infrastructure, a dozen detention basins, and natural streams divert floodwaters and recharge groundwater. Additional facilities and flood protection infrastructure are planned. **Figure S-2a, Drainage and Recharge Facilities**, shows areas capable of accommodating floodwaters and groundwater recharge.



*The 2010 flash floods damaged roadways and homes in Yucaipa.*





*The 2010 storms flooded low water crossings and created safety hazards.*

## Flood Hazards

Because of Yucaipa's steep terrain and seasonal storm events, the community is subject to a wide range of flooding hazards. The predominant flooding hazards are riverine flooding, mudflows, dam inundation, and urban flooding. These flooding hazards are described below and mapped on subsequent pages.

### Riverine Floods

Riverine flooding is the most prevalent flood hazard in Yucaipa and the source for the most devastating floods in the city. Yucaipa has many fluctuating waterways—Yucaipa Creek, Oak Glen Creek, Wildwood Creek, Chicken Springs Wash, and Spoor Creek. Although generally dry, these creeks can quickly accumulate water during storm events, as intense rainfall at higher elevations in the Yucaipa Ridge or Crafton Hills converges downstream in Yucaipa. These floods can overflow channels or adjacent floodways, quickly creating hazardous conditions for residents and motorists.

The Federal Emergency Management Agency (FEMA) is responsible for identifying flood hazards for communities across the nation. FEMA prepares maps that delineate Special Flood Hazard Areas—a 100-year and 500-year flood event. A 100-year flood is a flood event that has a 1% probability of occurring in any given year; a 500-year flood has 0.2% probability of occurring in any given year. The California Department of Water Resources also has identified areas prone to a 100-year flood using approximate assessment procedures, without specific depths and other flood hazard data. These maps are not FEMA regulatory floodplain maps.

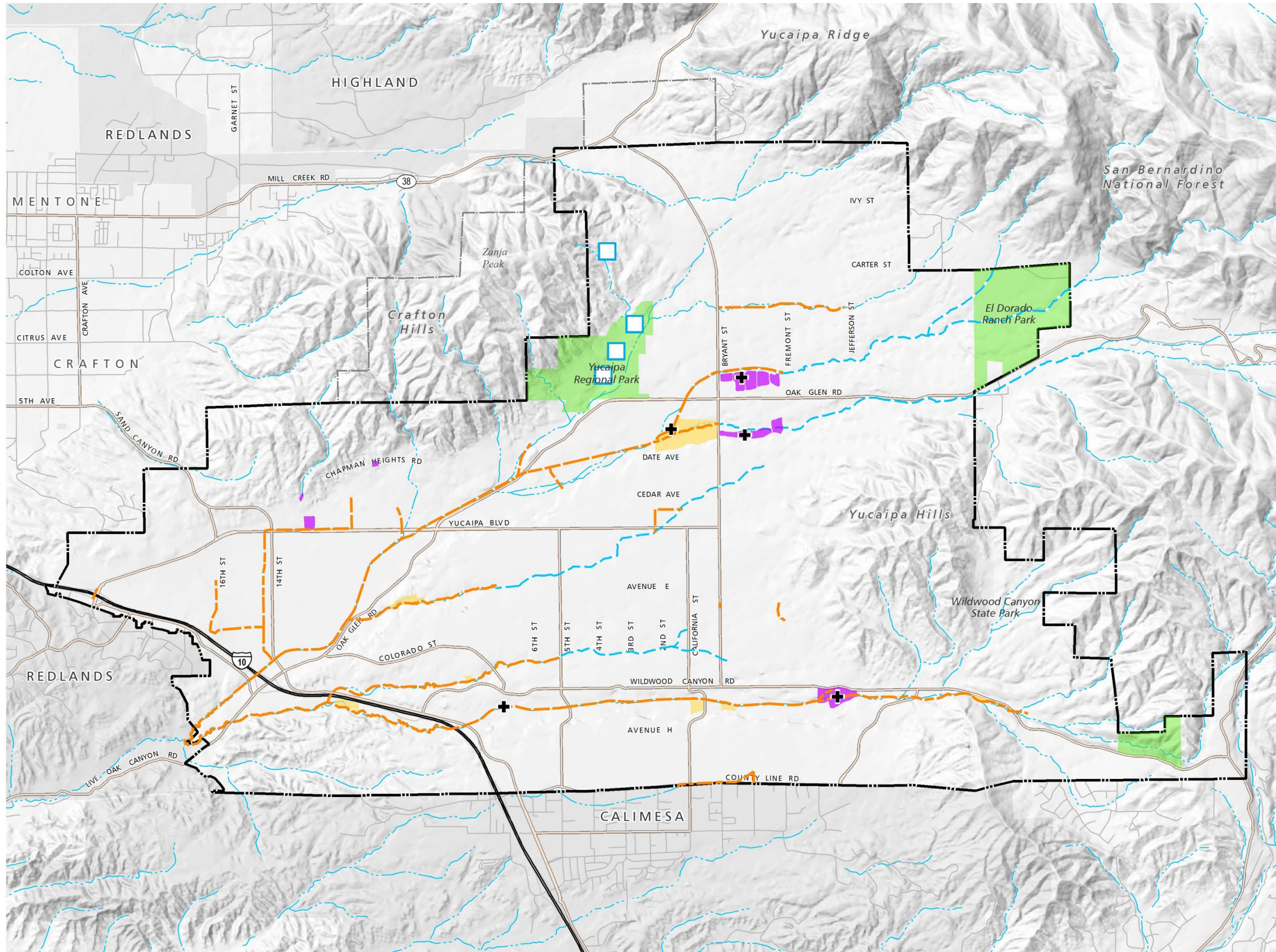
### Mudflow/Debris Flow

A mud/debris flow refers to a moving mass of loose mud, sand, soil, rock, water, and air that travels down a slope under the influence of gravity. A mud/debris flow can also flow down a stream, ravine, canyon, arroyo, or gulch. These flows develop when water rapidly accumulates in the ground during heavy rainfall or rapid snowmelt, changing loose earth into a flowing river of mud. Mud/debris flows can travel miles from the source, growing as they pick up trees, boulders, cars, and other materials.

Generally, areas most susceptible to mud/debris flow include steep slopes, landforms subject to erosion, and river channels. In areas burned by forest and brush fires, a lower threshold of rainfall may trigger mud/debris flows. In the past few decades, Yucaipa has experienced many smaller mud/debris flows and landslides along the Crafton Hills, northern Yucaipa, the Yucaipa Hills, and Oak Glen area that have damaged structures and roads. Planning for these situations is an essential post-fire recovery operation.

**Figure S-2b, Floodplain Safety Overlay District**, shows Yucaipa's potential safety hazards of riverine flooding and dam inundation.

**Figure S-2a  
DRAINAGE AND  
RECHARGE FACILITIES**



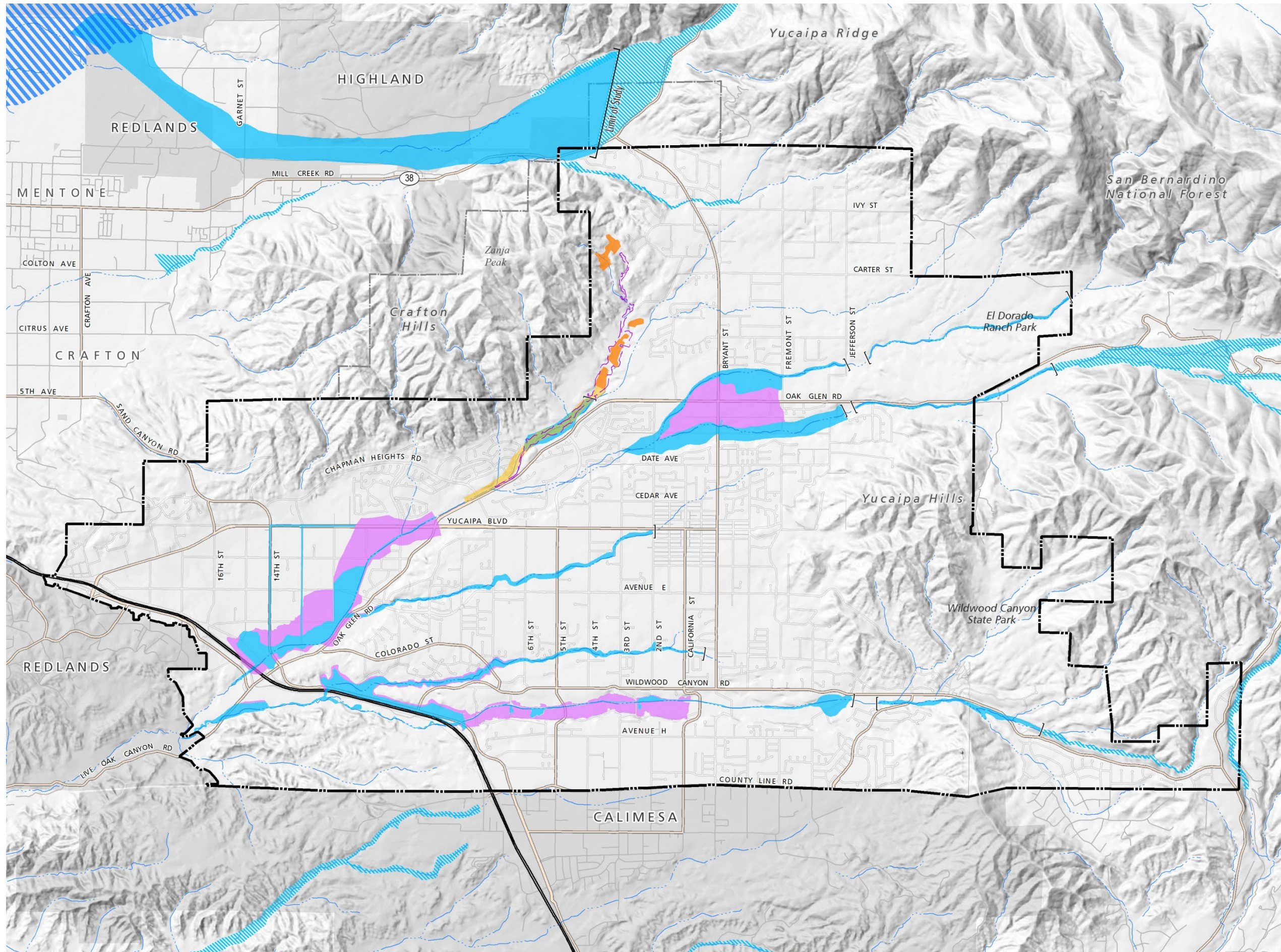
- City Limits
- Yucaipa Sphere of Influence
- Existing Drainage Basin
- Proposed Drainage Basin
- Open Space/Park Groundwater Recharge Areas
- Reservoir
- Drainage Channel
- Natural Drainage Channel
- Potential Groundwater Recharge Facility

Note: Where streams/rivers overlap with the drainage channels, the facilities have been channelized.



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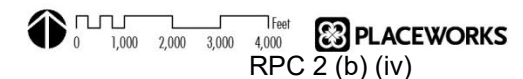


**Figure S-2b  
FLOODPLAIN SAFETY  
OVERLAY DISTRICT**

- City Limits
- Yucaipa Sphere of Influence
- Inundation Areas**
  - Reservoir
  - Yucaipa Res. Dam Inundation (1976)
  - Crafton Hills Dam Inundation (2010)
  - Seven Oaks Dam Inundation
  - Stream/River
- Overlay Designation**
  - Floodplain Review Area 1 (100 Year Flood Area)
  - Floodplain Review Area 2 (500 Year Flood Area)
  - Limits of Study
  - DWR Awareness Flood Areas

**Notes:**

1. Floodplain Review Area 1 (FP1): FP1 shall include all areas subject to a 100-year flood as defined by the Federal Flood Insurance Regulations and the Federal Emergency Management Agency (FEMA).
2. Floodplain Review Area 2 (FP2): FP2 shall include all areas between limits of the 100-year flood and subject to a 500-year flood, and certain areas subject to 100-year flooding with an average depth of less than one foot or where the contributing drainage areas are less than one square mile, or areas protected by levees from the base flood.
3. DWR Awareness Flood Areas: The Department of Water Resources has identified areas for potential 100-year flooding that may warrant further studies or analysis to assess the risk of flooding for regulatory purposes, and land use planning.
4. Delineation of FEMA flood zones continues to change in accordance with federal regulations and local flood control projects.



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## Dam Inundation

Yucaipa has four open reservoirs. Built in 1978, three reservoirs are located in Yucaipa Regional Park and serve recreational purposes. These dams are owned and operated by the San Bernardino Valley Municipal Water District. The fourth reservoir is located in Crafton Hills, above the Yucaipa Regional Park. Originally built in 2001, the Crafton Hills Dam was improved in 2013, and the reservoir was tripled in size in 2014. An intertie along Mills Creek diverts water from the State Water Project to fill the expanded Crafton Reservoir.

Dam inundation refers to flooding when water retention structures and dams fail during an earthquake or other emergency. In the event of an earthquake or other catastrophic event, these reservoirs present a remote risk of failure or breach. In that event, floodwaters would extend southward along Oak Glen Road, potentially affecting 50 homes in Chapman Heights. To mitigate this hazard, dams are required to pass safety standards and annual inspections by the California Department of Water Resources.

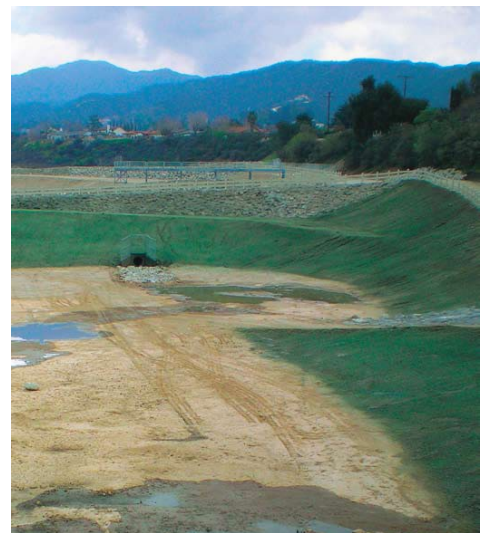
The City of Yucaipa has additional closed reservoirs (either above or below grade) that are owned, operated, and maintained by the Yucaipa Valley Water District, Western Heights Water Company, and South Mesa Water Company. During a significant natural disaster, these reservoirs could fail and lead to localized inundation, although to a significantly lesser degree than dams. Water districts are required to ensure that closed reservoirs are built, maintained, and retrofitted in accordance with state safety standards.

## Urban Flooding

Urban flooding refers to the built environment of the city. Although Yucaipa's flood control and drainage infrastructure direct the majority of floodwaters, flooding during intense storms is inevitable due to the volume of water draining from the mountains. Moving debris can quickly overwhelm or impede well-designed channels and basins, spilling onto streets and property. Typically, storm drains are designed for normal rainfall and provide protection from a normal storm event. However, when larger storms occur or storm drains are blocked, flooding may occur.

Several areas in Yucaipa are more susceptible to urban flooding. In particular, Dunlap Acres and areas below the confluence at Yucaipa Creek and Wildwood Creek are subject to flooding. Areas where roads decline below grade (low water crossings) or where limited infrastructure is in place are also susceptible to flooding. The City continues to invest in flood control projects (detention basins, storm drains, streets, and sidewalks, etc.) to reduce flood risks. However, due to Yucaipa's unique topography and built environment, urban flooding remains a concern in Yucaipa.

**Yucaipa continues to prioritize flood control projects to reduce potential flooding hazards. The \$6.1 million Oak Glen Creek Basin Project, \$7.2 million Wildwood Creek Basin Project, and other projects have significantly reduced flooding hazards in Dunlap Acres and other areas of the community.**



*Completion of the Oak Glen Creek Basins resulted in lifting floodplain restrictions for most properties in Dunlap Acres.*



## Protecting Our Community

Yucaipa protects the community from flooding hazards through the identification of hazards, enforcement of building codes and development standards, implementation of a master plan of drainage and capital improvements, and participation in mutual aid agreements, described below.

### Hazard Identification

Yucaipa's Municipal Code has a Floodplain Safety Overlay District that corresponds to FEMA 100-year and 500-year floodplains. These are included on these flood zone boundaries. The Floodplain Safety Overlay District Map identifies areas within Yucaipa needing additional protection from flooding hazards. Floodplain Review Area 1 (FP 1) includes areas subject to a 100-year flood. Floodplain Review Area 1 (FP2) includes all areas between limits of the 100-year flood and subject to a 500-year flood.

### Building Codes and Development Standards

Proposed development projects within the Floodplain Safety Overlay District must be designed to meet applicable California building codes and required amendments. Additional mitigation measures for flood hazards may be required, including structure anchoring, construction materials and methods, utility standards, and others as required by the Floodplain Safety Overlay District. Projects must also comply with requirements of the National Flood Insurance Protection Floodplain Management program.

### Master Plan of Drainage

The City continuously works on flood control projects to remove properties from delineated floodplains/ floodways and works with FEMA to make map revisions in accordance with federal law. Yucaipa's Master Plan of Drainage (MPD) and the City's capital improvement program outlines planned improvements to flood control infrastructure— including detention basins, desilting basins, flood channel stabilization, and improvements to drainage facilities and infrastructure needed to provide protection from flooding events. MPD projects are consistent with the Hazard Mitigation Plan and Yucaipa's annual Capital Improvement Program.

### Mutual Aid Agreements

Yucaipa maintains mutual aid agreements that provide for voluntary cooperative efforts and provision of services from other agencies when local capabilities are exceeded during an emergency. Yucaipa has mutual aid agreements with adjacent jurisdictions, San Bernardino County Flood Control District, Yucaipa Valley Water District, the State of California, federal agencies, Yucaipa-Calimesa Joint Unified School District, and American Red Cross, etc. The California Emergency Management Agency also provides coordination and funding to local disaster areas.





## GOAL S-2: FLOOD SAFETY

A community well versed in flood control hazards and protected from or minimally disrupted by flooding and inundation hazards.

### Policies

- S-2.1 Flood Hazard Identification.** Maintain and continuously update the City's floodplain safety hazards map in concert with FEMA map amendments and improvements to local drainage facilities.
- S-2.2 Floodplain Development.** Promote the dedication of land within the 100-year floodplain and adjacent areas for park, multi-purpose trails, recreational uses, open spaces, and habitat conservation/mitigation.
- S-2.3 Land Use Regulations.** Prohibit development of new essential and critical facilities and lifeline services in the 100-year floodplain. Prohibit facilities that use, store, transport, or dispose of hazardous materials from developing in the Floodplain Safety Overlay District.
- S-2.4 Building Codes.** Require adherence to the latest building, site, and design codes in the California Building Code, FEMA flood control guidelines, and Floodplain Safety Overlay District to avoid or minimize the risk of flooding hazards in the community.
- S-2.5 Special Flood Hazard Areas.** Support policies, procedures, and recommendations of the National Flood Insurance Program for SFHAs with respect to zoning, subdivision, building codes, and overlays.
- S-2.6 Flood Control Facilities.** Prioritize and fund maintenance and construction of improvements to drainage facilities and roadways identified in the City's Master Plan of Drainage and Hazard Mitigation Plan.
- S-2.7 Stormwater Runoff.** Require new developments that add substantial amounts of impervious surfaces to integrate low impact development best management practices to reduce stormwater runoff.
- S-2.8 Interagency Coordination.** Establish and maintain cooperative working relationships among public agencies with responsibility for flood protection, including San Bernardino County Flood Control District, County Public Works, and other entities.
- S-2.9 Public Education and Preparedness.** Compile and distribute flooding prevention information to Yucaipa residents and business owners; conduct periodic inspections and preparedness events.



## FIRE SAFETY

Yucaipa is subject to a range of urban fire hazards due to its built environment—its buildings, roads, and adjacency to other cities. Yucaipa’s dry weather conditions, topography, high winds, and vegetation also place the city at a very high risk of wildfire. Left uncontrolled, fires have the potential to damage or destroy structures, roadways, and utility systems and disrupt the economy.

### Fire Hazard Setting

Yucaipa’s fire hazard responsibilities include response to urban fires, wildland fires, and emergency medical response.

#### Urban Fire

Yucaipa’s built environment has a medium to low fire hazard. Developed areas include some apartments, offices, mercantile, and industrial occupancies not normally requiring extensive rescue. Lower-hazard occupancies include a one-, two- or three-family dwellings, scattered small business, and industrial occupancies. Each year, Yucaipa averages 350 fires, including 100 vegetation fires, 100 structure fires, 75 vehicle fires, and 75 miscellaneous fires. Most urban fires can be extinguished within a few hours.

Yucaipa’s fire service responsibilities extend beyond firefighting suppression to include a range of paramedic and lifeline services. Approximately 70% of CAL FIRE calls (more than 7,000 calls annually) are for medical services. The Fire Department also responds to about 500 traffic collisions each year. Because of Yucaipa’s demographics and the nature of fire service calls, the provision of licensed paramedics trained in advanced life support during emergencies has become increasingly important.

Yucaipa Fire maintains aid agreements with surrounding agencies to provide assistance during and after a fire emergency. Automatic aid agreements are in place with the City of Redlands Fire Department and Riverside County Fire Department. Yucaipa Fire maintains mutual aid agreements with the US Forest Service for wildland areas north and east of Yucaipa. Mutual and automatic aid agreements are also in place with the San Bernardino County Fire Department. Yucaipa Fire also maintains a cooperative agreement with the San Bernardino County Fire Department.

The Insurance Service Office (ISO) is a leading source of information about property casualty insurance risk for local government. ISO helps establish fire insurance premiums for residential and commercial properties based in part on a city’s fire protection. ISO rankings are based on four criteria: a community’s emergency communications, fire department equipment and operations, and water supply. ISO rates each community’s fire suppression system on a 10-point scale, with one (1) being the highest ranking that can be achieved. Yucaipa maintains a Class 3 ISO rating.



## Wildland Fire

Wildland fire is a critical concern in Yucaipa. Expansive open areas are susceptible to destructive wildland fires, which can be exacerbated by dry weather and Santa Ana winds. The National Fire Plan designates Yucaipa as a “community at risk” of high wildland fire hazard (CAL FIRE 2014). Vegetation fuel types in the City include annual grasses and a variety of brush with low fuel moisture that are highly susceptible to and capable of carrying fire.

Since 2000, the City of Yucaipa has experienced many wildland fires due to a natural causes, human error, and arson. Over the past decade, all of the notable fires have occurred in hillsides surrounding Yucaipa. According to CAL FIRE, USFS, and USGS, notable fires include:

- + 2015 Mill 2 Fire burned 35 acres
- + 2013 Mentone/Yucaipa Fire burned 534 acres
- + 2011 Mill Fire burned 100 acres
- + 2009 Pendleton Fire burned 860 acres
- + 2009 Oak Glen Fire burned 1,015 acres
- + 2009 Crafton Hills Fire burned 350 acres
- + 2007 Yucaipa Ridge Fire burned 280 acres
- + 2007 Jefferson Fire burned 125 acres

Responsibility for wildland fire prevention and suppression includes the city, state, and federal government. The federal government has the primary responsibility in Wildwood Canyon, Yucaipa Hills, and National Forest. These “federal responsibility areas” (FRA) total 8% of the acreage within the City and sphere of influence. Areas where the State of California has primary responsibility (called “State Responsibility Areas” or “SRA”) comprise 17%, primarily in the Crafton Hills and El Dorado Ranch Park. Local responsibility areas comprise most of the developed areas in Yucaipa.

According to CAL FIRE, half of the City of Yucaipa is designated as a Very High Fire Hazard Severity Zone (VHFHVS) based on fuels, terrain, and weather. These lands are characterized by fire-prone land cover—primarily valley grasslands, mixed chaparral, and shrub communities. Significant residential growth is planned over the buildout of Yucaipa; however, only 3,500 units will be located in a VHFHVS . Of those total units, only a fraction is permitted within SRA lands (~200 units) or within FRA lands (~150 units), which are protected by CAL FIRE and the US Forest Service, respectively.

The City of Yucaipa designated fire-prone areas with a fire safety overlay district. **Figure S-3, Fire Safety Overlay District**, designates these areas as FR-1 (Very High Fire Hazard Severity Zones) and FR-2, which are lands vulnerable to fire due to proximity to FR-1 areas.

## Protecting Our Community

CAL FIRE provides fire service protection for Yucaipa in accordance with its Unit Fire Plan and service contract covering the entire city and



surrounding State Responsibility Area. The following section describes CAL FIRE services, City requirements for adequate infrastructure, and municipal code requirements for land uses citywide and in the fire service overlay districts.

**Fire Stations**

CAL FIRE provides fire suppression and paramedic services for Yucaipa in accordance with its Unit Plan and service contract. CAL Fire provides services from three permanent local stations and one reserve station in Oak Glen (volunteer staffed). Table 1 shows Yucaipa’s fire stations locations, equipment, and staffing.

**Table S-1 Fire Services**

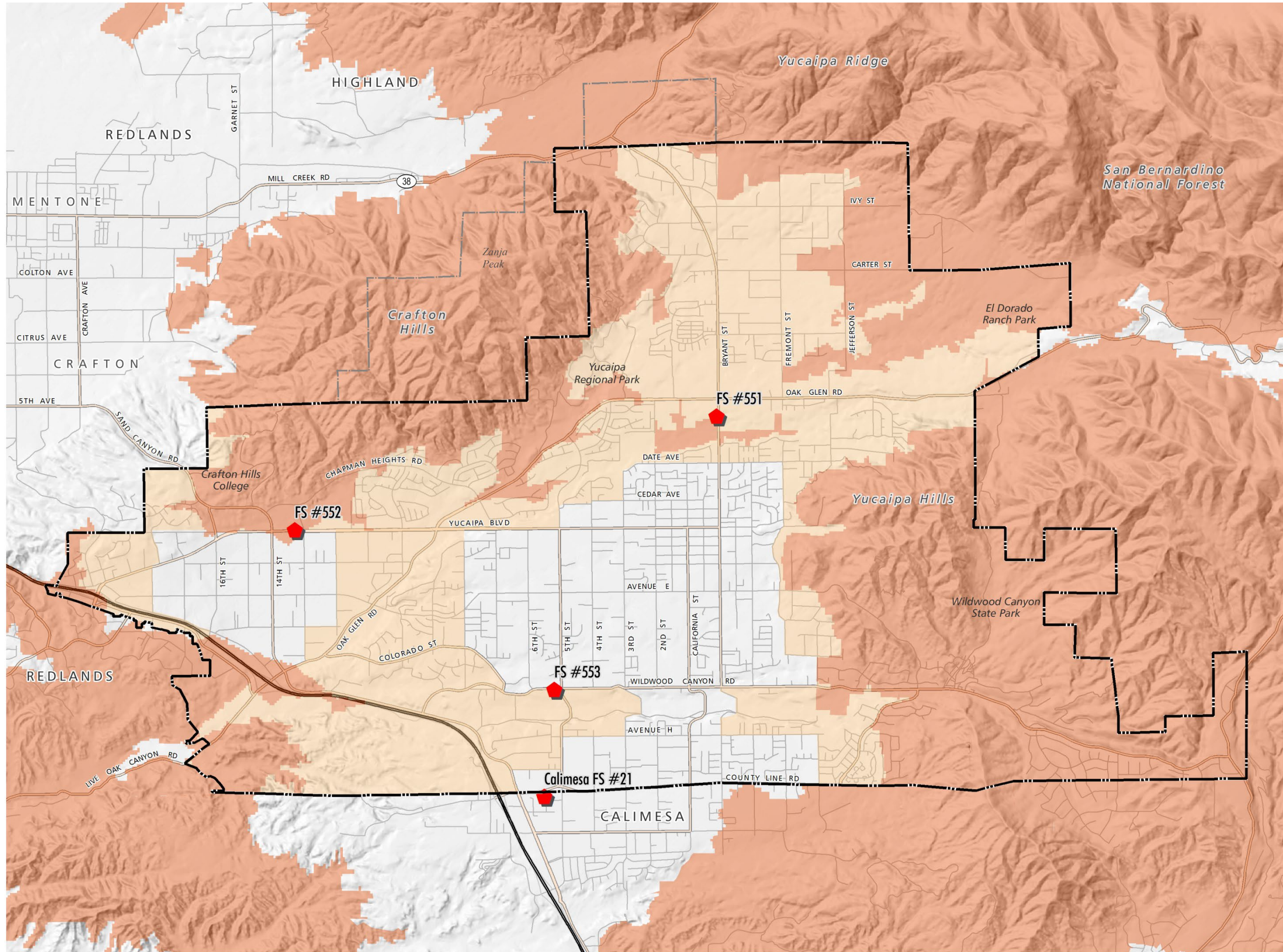
| Station and Location                                     | Equipment   | Daily Staffing  |
|--|---|---|
| Cal-Fire Station<br>Fire Station No. 1<br>11416 Bryant   | <ul style="list-style-type: none"> <li>• 1 Front Line Type I Fire Engine</li> <li>• 2 Front Line Type III Fire Engines</li> <li>• Fire Station Heliopad</li> <li>• Utility (Quick Response Rescue)</li> </ul> | Each Type I engine is ALS municipally staffed with minimum 3-person crew—incl. 1 captain, 1 engineer, and 1 firefighter. (one paramedic-qualified). |
| Crafton Station<br>Fire Station No. 2<br>32664 Yucaipa   | <ul style="list-style-type: none"> <li>• 1 Front Line Type I Fire Engine</li> <li>• 1 Reserve Type I Fire Engine</li> <li>• 1 Type II Fire Engine</li> </ul>  | Each Type III engine is minimum staffed with 3-person crew, incl. 1 captain or engineer and 2 firefighters.   |
| Wildwood Station<br>Fire Station No. 3<br>34259 Wildwood | <ul style="list-style-type: none"> <li>• 1 Front Line Type I Fire Engine</li> <li>• 1 Reserve Type I Fire Engine</li> <li>• 1 Utility (Pick up)</li> </ul>  |   |
| Oak Glen Station<br>(Volunteer)<br>11877 Oak Glen        | <ul style="list-style-type: none"> <li>• 1 Type III Fire Engine</li> <li>• 1 Type IV Fire Engine</li> <li>• 1 Type II Water Tender</li> </ul>   | Varied staffing depends on available reserve (volunteer) firefighters   |

Yucaipa has opted for the CAL FIRE staffing of 3-person crews, plus an assigned Fire Captain at all times on each engine. Through agreements with cooperating fire departments and assigned Yucaipa fire engines, CAL FIRE makes available a total of 4 to 5 fire engines plus a chief officer on a standard structure fire response depending on the reported type of structure, for a total complement of 13 to 16 personnel. Staff arriving at an incident is paramedic qualified and can provide advanced life support services.

Yucaipa Fire strives to meet National Fire Protection Association (NFPA) standards for responding to fire and other emergencies. NFPA recommends that first responders arrive at the fire scene in five minutes or less at least 90% of the time. Response time is measured from the time of the 911 call to arrival at the scene. Yucaipa Fire currently averages about five minutes to all parts of the city, including the Wildwood Canyon and Oak Glen areas.

Over the past several years, Yucaipa Fire has seen an increase in the number of medical aid calls, which have impacted resource deployment and “high time on task” efforts that result in a corresponding increase to response times.





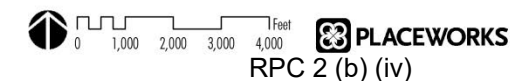
**Figure S-3**  
**FIRE SAFETY**  
**OVERLAY DISTRICT**

- City Limits
- Yucaipa Sphere of Influence
- Fire Stations
- Overlay Designation**
- FR1 Fire Safety Review Area 1
- FR2 Fire Safety Review Area 2

**Notes:**  
Based on Section 85.020215 of the City of Yucaipa Municipal Code, the City's Fire Safety Overlay District is divided into two review areas, each of which represents a different level of wildland fire hazard.

**Fire Safety Review Area 1 (FR1):** Includes wildland areas that are marginally developable, areas which are not likely to be developed, and the area of transition between wildlands and areas that are partially developed or are likely to be developed in the future. Area 1 corresponds to very high to extremely high fire hazard severity zones recommended by CALFire.

**Fire Safety Review Area 2 (FR2):** Includes relatively flat land that is either partially or completely developed, or, if it is not developed, is usually suitable for development. Present and future development within Area 2 is exposed to the impacts of wildland fires and other natural hazards primarily due to its proximity to FR1.



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## Water Supply

Adequate and reliable water supplies are essential to suppress fires. Yucaipa adheres to fire infrastructure and flow requirements in accordance with the California Fire Code (2013), National Fire Protection Association standards, and local standards. Table S-2 shows the City's fire flow standards for new development projects.

**Table S-2 Fire Flow Standards for New Development**

| Type of Development                         | Flow (gpm) | Duration (hours) | Fire Hydrants |
|---|------------|------------------|---------------|
| Detached Single Family Residential          | 1,500      | 2                | 2             |
| Attached Multifamily Residential            | 3,000      | 2                | 3             |
| Light Commercial/Industrial (incl. schools) | 3,000      | 3                | 3             |
| Heavy Commercial/Industrial                 | 5,000      | 4                | 4             |

Source: Yucaipa Valley Water District, 2015

Note: The City requires new projects in undersupplied areas to provide fire sprinkler systems and adequately sized on-site reservoirs to provide fire flow requirements

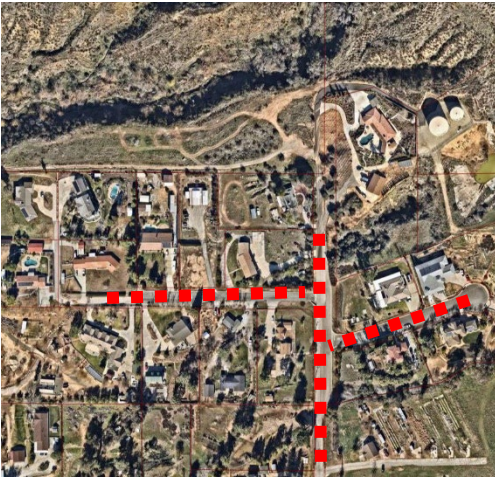
Yucaipa's water system (water lines, tanks, pump stations, etc.) is sized to handle the highest demand on the system. This is calculated assuming a worst-case scenario for the fire hydrant farthest from the connection to the distribution system, at the highest elevation, assuming the supply reservoir is half full. Water pipes are sized to allow a maximum daily flow plus fire flow that provides a residual pressure of 20 psi (pounds per square inch) and maximum velocity of 10 fps (feet per second) system wide.

Yucaipa's water system provides adequate water supply, although some areas may comply with lower standards in effect at that time. CAL FIRE maintains fire pre-plans (included in each assigned fire engine) that address water shortages, building types/construction types, water sources, and other features of the area in question. When a response is initiated in these areas, the Incident Commander can request additional water resources (e.g., water tenders, mutual aid, aerial support, etc.) as needed.

Water supplies can be interrupted or curtailed due to drought, fire, earthquake (which damage facilities and infrastructure), or power failure. In case of emergency, YVWD maintains backup generators for critical infrastructure to avoid supply interruptions. YVWD can maintain or supplement water supplies through interties with adjacent water companies or standby production wells. Critical facilities are compliant with state seismic safety standards.

In cases of extended-attack fires or wildland fires, CAL FIRE uses a triage of strategies. CAL FIRE maintains *emergency land use agreements* with the County and Yucaipa Valley Water District to draw water from Yucaipa Reservoir, Crafton Hills Reservoir, and Yucaipa Regional Park. Water tenders are used to transport water to a fire when hydrants or other supplies are not near the fire. Cooperative agreements with other agencies are also employed.





*The City is currently developing a map that identifies residential developments in hazard areas that do not currently have at least two emergency evacuation routes identified.*

### Fire Access Standards

Yucaipa's has adopted the California Fire Code (CFC) with amendments to address local fire hazard concerns. Specific requirements for fire access include:

- + **Roadway Design.** Access roads and public and private streets shall not exceed a 12% grade, be capable of supporting 75,000 pounds, and built with all-weather driving capabilities
- + **Subdivision Access.** Subdivisions must have two points of vehicular ingress and egress from streets, one of which may be used for emergency purposes only.
- + **Road widths.** Roads shall be at least 24 feet wide citywide and allow for 2-way traffic and 26 feet in FR1 areas; emergency vehicle access only is required to have a 20-foot minimum.
- + **Bridge Design.** Per the California Fire Code, access bridges meet nationally recognized design standards, including a capability of supporting 75,000 pounds.
- + **Project Perimeter.** Projects must provide adequate vehicular access for firefighting vehicles to the perimeter of a project that is adjacent to a fuel modified area or fire hazard area.

### Vegetation Management

The Yucaipa Municipal Code incorporated the latest 2013 CFC and appendices, and amended it to address vegetation management. New structures in areas containing combustible vegetation must secure a fuel modification plan approved by the Fire Official. The plan must address water supply, access, building ignition and fire resistance, fire protection systems and equipment, defensible space, and vegetation management consistent with the CFC's "Requirements for Wildland-Urban Interface Fire Areas."

In accordance with the California Public Resources Code, properties upon or adjoining hazardous fire areas must maintain a 100-foot defensible space around structures, with most intensive fuel management within the first 30 feet around the structure. Electrical transmission lines must have at least 10-foot clearances. To facilitate emergency access and evacuation, 10-foot clearances are required along each side of portions of highways and private streets that are improved, designed, or ordinarily used for vehicles.

Additional vegetation management strategies are employed in state and federal responsibility areas. The United States Forest Service, CAL FIRE, and San Bernardino National Forest maintain a system of fuelbreaks to protect Yucaipa from wildfires. Fuelbreaks are listed in the Oak Glen/Banning Hazardous Fuel Reduction Project and the Inyo-Mono-San Bernardino Unit Fire plans. Fuelbreaks are located below Yucaipa Ridge, the interface of Yucaipa Hills and Oak Glen, Crafton Hills, and Wildwood Canyon.



## Building, Development, and Signage Regulations

Yucaipa has adopted the latest edition of the California Fire Code, with all appendices, and amended it to address local concerns. The Fire Marshall reviews plans for structures and buildings citywide, including fire-prone areas. Checklists are used to address fire code requirements, including but not limited to: street and building signage, water supply, water infrastructure, sprinkler requirements, building requirements (sprinklers, smoke detectors, roofing, etc.), access roads, and vegetation management among others.

The City enforces uniform building address and street sign letters. Street sign letters must be at least 4" in height and 3/8" in width. As required by the Fire Code, addresses for single-family structures shall be 4" in height, 3/8" in width, on contrasting backgrounds, and plainly visible and legible from an access roadway or the street. Commercial and multi-family projects shall have numbers of 8" in height and 1/2" in width, and on contrasting background. Industrial address letters must be 12" in height and 1" in width.

## Hazardous Materials

Yucaipa Fire is responsible for inspecting facilities that handle hazardous materials, generate or treat hazardous waste, and/or operate an underground storage tank. Yucaipa Fire also responds to situations where local traffic accidents lead to a spillage of hazardous materials. Additional governmental agencies help protect Yucaipans from hazardous waste and materials. As the certified unified public agency (CUPA), the County of San Bernardino Fire Department implements the hazardous waste and materials standards for Yucaipa. This program covers seven areas.

- + Aboveground Petroleum Storage Act (APSA) Program
- + Area Plans for Hazardous Materials Emergencies
- + California Accidental Release Prevention (CalARP) Program
- + Hazardous Materials Release Response Plans and Inventories
- + Hazardous Material Management Plan (HMMP)
- + Hazardous Waste Generator Program
- + Onsite Waste Treatment Program
- + Underground Storage Tank Program

While Yucaipa does not have large hazardous waste generators or facilities typical for cities, other facilities present key fire hazards. Southern California Gas Company operates a high-pressure gas transmission and distribution pipeline that extends along Interstate 10 and then northward along the western portion of the city and the southernmost section of the community north of the I-10. If this high-pressure gas distribution line ruptured during an earthquake, the released gas could result in a significant fire.



### GOAL S-3: FIRE SAFETY

A community that implements proactive fire hazard abatement strategies and, as a result, is minimally impacted by wildland and urban fires.

#### Policies

- S-3.1 Fire Hazard Identification.** Maintain and continuously update the City's fire hazard overlay map for changes in fire hazard severity overlay district consistent with changes in hazard designations by CAL FIRE.
- S-3.2 Fire Service Levels.** Provide appropriate staffing levels, equipment, facilities, and training to maintain an Insurance Service Office Rating of 3; continue to strive to meet the latest industry standards in fire safety.
- S-3.3 Fire Department Resources.** Provide periodic assessments of existing Fire Department resource utilization and community growth trends to inform planned equipment purchases to best ensure that it will meet future emergency service needs.
- S-3.4 Fire Department Funding.** Use a variety of funding sources, such as facilities districts, to fund and sustain needed resources. As part of such resources, ensure land use planning allows for the full use of new equipment (such as encouraging projects that would directly need and benefit from an aerial ladder truck) to provide an appropriate return on investment.
- S-3.5 Fire Codes.** Require adherence to applicable fire codes for buildings and structures, fire access, and other standards in accordance with Fire Hazard Overlay Districts, California Fire Code, and municipal codes; encourage retrofit of nonconforming land uses.
- S-3.6 Fuel Modification.** Require adherence to fuel modification and defensible space requirements to reduce wildfire hazards; work with CAL FIRE to coordinate fuelbreaks in Very High Fire Hazard Severity Zone. Require new projects to provide a funding mechanism for provide long term maintenance of clearances.
- S-3.7 Permit Approvals.** Ensure compliance with the Subdivision Map Act requirements for structural fire protection and suppression services, subdivision requirements for on/off-site improvements, ingress and egress, street standards, and other concerns.
- S-3.8 Adequate Water Supply and Redundancy.** Work with public and private water distribution and supply facilities to ensure adequate water capacity and system redundancy to supply emergency firefighting needs.



- S-3.9 Critical Facilities and Structures.** Locate, design, maintain, and upgrade critical facilities, structures, and infrastructure (police stations, roads, utilities, reservoirs, residential development, etc.) to minimize exposure to fire hazards.
- S-3.10 Public Education.** Educate the community about fire prevention and suppression; work with other agencies and private interests to educate private landowners on fire-safe measures to achieve a low risk condition.
- S-3.11 Post-fire Treatment.** Work with CAL FIRE, USFS, USGS, and applicable nongovernmental agencies to create a plan to address post-fire recovery activities and projects that allow burned areas to fully recover and minimize repetitive losses and further damage.
- S-3.12 Comprehensive Public Safety.** Proactively work with local emergency services providers (such as ambulance services and CONFIRE) to maintain Fire Department resource availability to effectively respond to fire service calls.
- S-3.13 Upgrades to Infrastructure.** By 2025, the City will identify existing areas that have inadequate fire department access and evacuation routes, including residential neighborhoods that do not have two access routes available. Provide updates and programs to minimize risks to those neighborhoods.
- S-3.14 Fire Hazard Reduction.** Develop an annual program that provides for fire hazard reduction projects, including community fuel breaks and private road and public road clearance. Encourage the development of “NFPA Firewise USA” Communities in areas of Very High Fire Hazard Severity Zone for resident involvement.





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## EMERGENCY PREPAREDNESS

Management of emergencies and disasters consists of: 1) event preparedness; 2) response during or soon after the event; (3) post-event recovery; and 4) hazard mitigation. To accomplish these phases requires quick, dynamic, and effective response from multiple entities. This requires preparation by public agencies, neighborhoods, businesses, and families.

### Planning For Disasters

Yucaipa Fire Department, Police Department, and the public safety management within the City Manager's office coordinate emergency preparedness planning, response, and recovery efforts. These include:

#### Preparedness

Yucaipa adheres to the National Incident Management System (NIMS) for emergency preparedness. NIMS is a systematic approach for government, nongovernmental organizations, critical infrastructure owners and operators, and the private sector to work together to manage threats and hazards. The NIMS provides a comprehensive and standardized incident management system for agencies that are involved in emergency management and/or incident response. The City of Yucaipa is NIMS-compliant as articulated in its Emergency Operation Plan and therefore eligible for federal preparedness grants and award.

#### Response Phase

Yucaipa follows the Standardized Emergency Management System (SEMS) to structure its response phase of emergency management. Adopted by California, SEMS unifies all elements of emergency management into a single integrated and standardized system. SEMS incorporates an incident command system, field-level emergency response system, multi/inter-agency coordination, mutual aid, and operational area concept. Yucaipa is SEMS-compliant and therefore eligible for reimbursement of response-related costs under state disaster assistance programs.

#### Recovery/Prevention

Yucaipa coordinates and manages recovery/prevention activities following emergencies/disasters through the City Manager and the Emergency Services Coordinator. City staff may also assist in facilitating and leading the recovery process. For declared emergencies, City staff complete a detailed damage/safety assessment that is forwarded to County OES for inclusion in the County's IDE report. After-Action Reports will identify corrective actions and make recommendations for correcting problems noted in the response/recovery effort, or during exercises and training.

The City's Emergency Operations Plan and Hazard Mitigation Plan provide additional information on these and other topics.



*Community events like "Are You Ready Yucaipa?" draw more than 1,000 residents and businesses each year.*



## Protection and Preservation of Public Facilities, Critical Infrastructure, and Lifeline Services

Disaster planning and recovery depend on a reliable network of public facilities, critical infrastructure, and lifeline services. Public facilities include police and fire stations, schools, community centers, and emergency operations and communication centers. Critical infrastructure includes generators, water and sewer lines, utilities, transportation routes, etc. Lifeline services critical to health and safety include water, sewer, energy, waste disposal, communications, and others. **Figure S-4, Critical Facilities and Infrastructure**, identifies critical facilities and infrastructure.

Emergency preparedness extends beyond construction activities to planning in system redundancies so that a single event (e.g., power failure or road failure) does not prevent the provision of essential services, such as paramedics, water supply, or other service. California law mandates that buildings, bridges, and infrastructure be built in accordance with state and federal building standards to protect from flooding, earthquakes, fire, and other disasters. The City periodically upgrades facilities in accordance with the above.

### Evacuation Routes

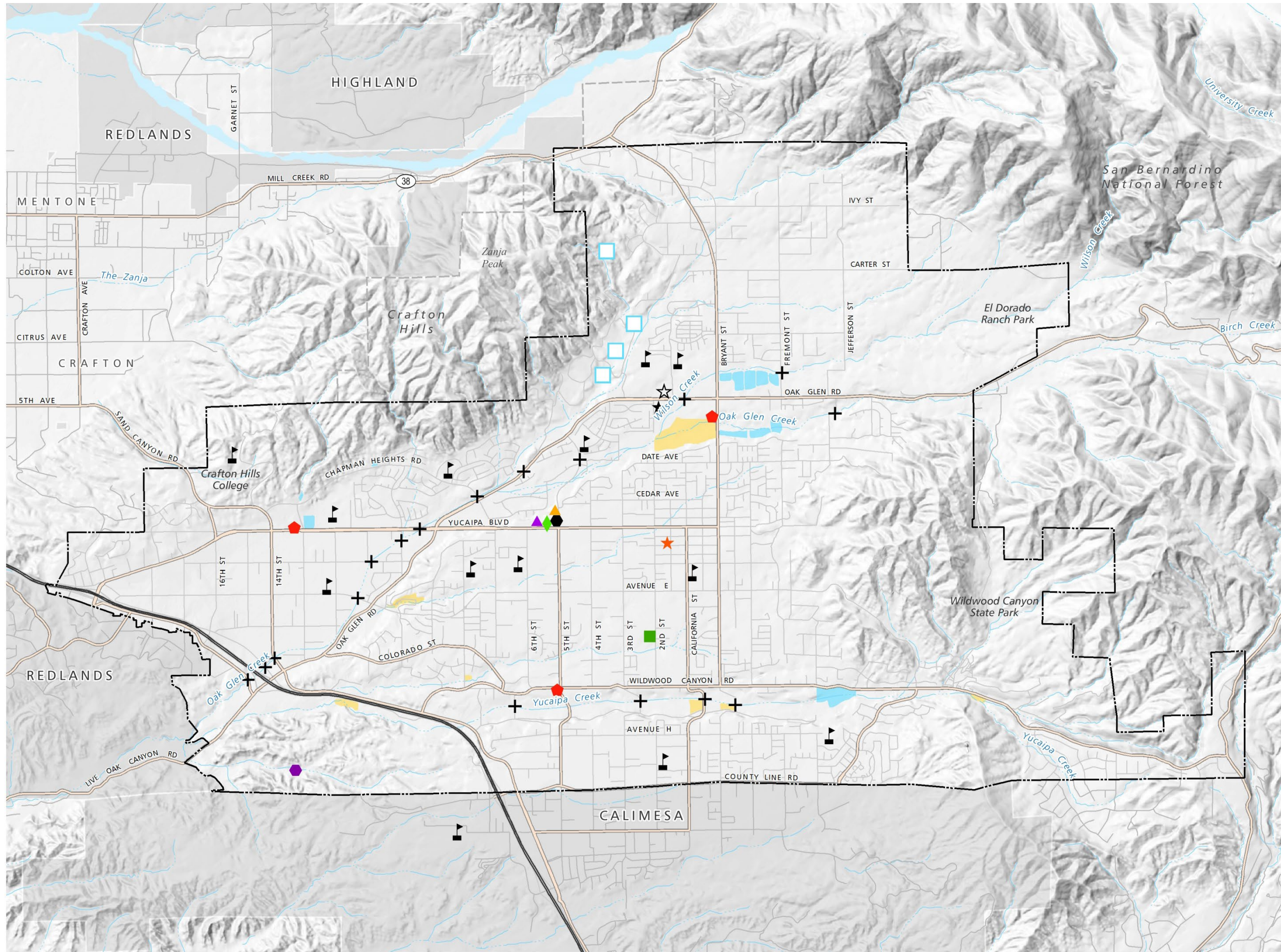
With its location in the foothills and near wildlands, Yucaipa is subject to natural hazards. These include 100-year floodplains, active faults and geological hazards, Very High Fire Hazard Severity Zone, and other natural hazards. During an emergency, evacuation routes are needed to move people to safe locations and move equipment to affected hazard areas. Yucaipa has three levels of evacuation routes, depending on the emergency.

- + **Local Routes.** Eight arterials (Bryant, Oak Glen, Yucaipa, 14<sup>th</sup> Street, Wildwood Canyon, County Line, Calimesa Boulevard, and Mesa Grande) are designated as evacuation routes.
- + **Regional Routes.** The San Bernardino County General Plan has designated Oak Glen Road as the primary regional evacuation routes for the Oak Glen Mountain community.
- + **Federal and State Routes.** Interstate 10 is the primary federal evacuation route while Highway 38 is the primary state-designated evacuation route from the mountain communities.

The precise evacuation route to use during an emergency depends on many factors, including the type of natural disaster, location of incident, weather conditions, road conditions, and traffic volume. **Figure S-5, Evacuation Routes in Yucaipa**, identifies the local, regional, and state/federal evacuation routes in the city.



**Figure S-4  
CRITICAL FACILITIES  
AND INFRASTRUCTURE**



- City Limits
- Yucaipa Sphere of Influence
- Critical Facilities**
- Reservoir
- School
- Fire Station
- Library
- City Hall/Emergency Operations Center (EOC)
- Police Dept/Alternative EOC
- Yucaipa Transit Station
- Yucaipa Community Center
- Public Works Yard/Records Center
- Scherer Community Center
- Yucaipa Valley Wastewater Treatment Plant
- Yucaipa Valley Water District
- Major Bridge
- Existing Drainage Basin
- Proposed Drainage Basin
- Major Roads

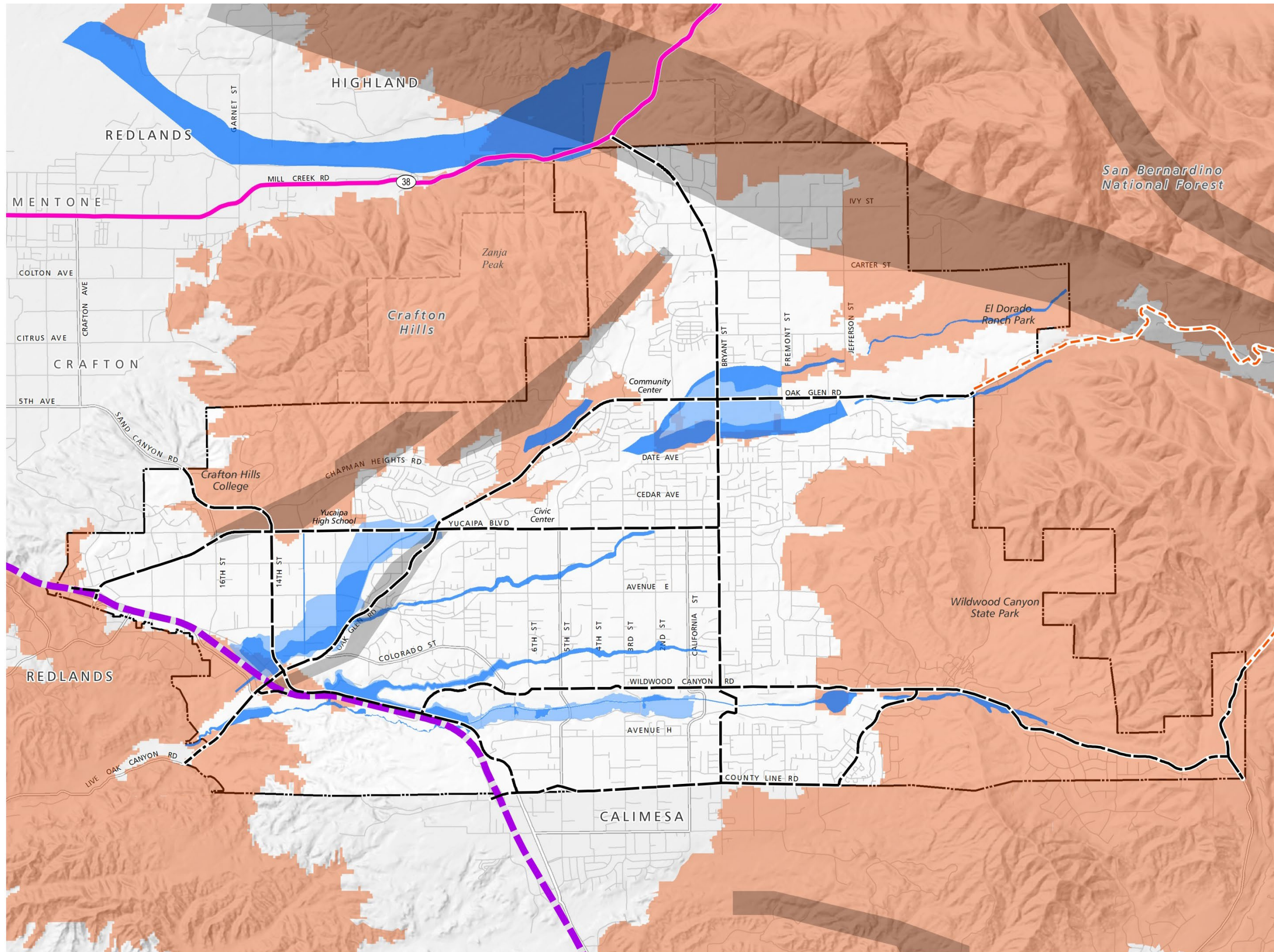


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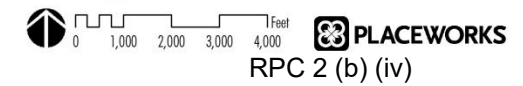


Figure S-5  
EVACUATION ROUTES



- City Limits
- Yucaipa Sphere of Influence
- Evacuation Routes**
  - Local Evacuation Route
  - Regional Evacuation Route
  - State Hwy Evacuation Route
  - Interstate Evacuation Route
- Hazard Designation**
  - Alquist Priolo Fault Zone
  - Floodplain Review Area 1 (100 Year Flood Area)
  - Floodplain Review Area 2 (500 Year Flood Area)
  - Fire Safety Review Area 1 (Very High Fire Severity)

Note:  
 1. Evacuation routes depend on many factors, including the type of emergency or disaster, location of incident, weather conditions, road conditions, and traffic.  
 2. Delineation of hazard designations are subject to change in accordance with federal and state regulations and local mitigation projects.



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## GOAL S-4: EMERGENCY PREPAREDNESS

A comprehensive preparedness program that anticipates the potential for disasters, maintains continuity of life-support functions, and uses community-based disaster response planning.

### Policies

- S-4.1 Hazard Planning.** Update the City's hazard mitigation and emergency operations plan on a timely basis; coordinate with relevant agencies responsible for updating water, fire, or other hazard mitigation plans.
- S-4.2 Training.** Require training of City emergency response personnel through coursework, emergency operations plan orientation, disaster service training, emergency operations center training, and other topics.
- S-4.3 Public Education.** Promote education and events that reinforce the responsibility and capability of residents, business owners, and City staff to plan for, respond to, and recover from emergencies and disasters; implement and support local CERT programs.
- S-4.4 Interagency Support.** Sustain mutual aid and automatic aid agreements through the California Disaster and Civil Defense Master Mutual Aid Agreement, and with adjacent service providers (fire, flooding, earthquake, emergency medical, etc.).
- S-4.5 Communications.** Maintain communication protocols and systems for coordinating emergency service providers, public agencies, business, schools, utilities, and other affected parties to respond in an effective manner to emergencies and disasters.
- S-4.6 Critical Facilities and Lifeline Services.** Coordinate with service providers to ensure that essential facilities, lifeline services, and infrastructure (water, sewer, communication, power, roads, etc.) are capable of responding following a disaster.
- S-4.7 Emergency Access and Evacuation.** Maintain, update, and improve, as needed, emergency access, protocols, and evacuation routes for residents, business, equine and large animals; regularly exercise evacuation protocol and procedures to assess their effectiveness and correct deficiencies.
- S-4.8 Disaster Recovery.** Work with emergency service providers to implement post-disaster recovery plans to return public services to a state of normalcy, address ongoing hazard-specific mitigations, and assist community members in recovering from disasters.



## SEVERE WEATHER

Typically, communities focus public safety programs on addressing community-wide hazards such as earthquakes, fire, flooding, and other hazards that have a widespread impact and cost. However, severe weather conditions can also cause substantial damage to property and infrastructure and result in injuries and loss of life. Yucaipa recognizes that the frequency of severe weather in the community makes it a public safety concern for residents.

### Weather Hazards

According to the City's Hazard Mitigation Plan, Yucaipa is generally susceptible to high winds, extreme heat, torrential rain and lightning, and occasional snow or freezes.

#### High Winds

Yucaipa's location at the base of the San Bernardino Mountains makes it susceptible to straight-line winds that can exceed 100 miles per hour, knocking down trees and power lines and disrupting utility service. From October through February, Yucaipa also experiences warm and dry Santa Ana winds that descend from the high desert and can reach speeds of 100 miles per hour. The most significant hazard from high winds is an increased wildfire danger, but winds can down trees and power lines, damage property, and create hazards for aircraft. Every year, Yucaipa experiences numerous high wind events.

#### Extreme Heat

Yucaipa is known for exceptionally dry and hot weather, particularly during summer when maximum temperatures often exceed 100 degrees. Extreme heat becomes a broader health hazard when it either affects residents (due to the potential for heat-related illness) or results in electric power outages. Periodic extreme heat events in San Bernardino County influence the ability of utilities to provide electric service. Although formal stage alerts causing service interruption have not occurred frequently in several years, load warnings and voluntary reductions have occurred.

#### Rainfall and Freezing Weather

Due to elevation and topography, Yucaipa experiences more intense storms than other cities. Thunderstorms from July through September can create lightning strikes, erratic high winds, and torrential rains. Yucaipa's elevation also results in seasonal freezing weather and one to four inches of snow each year. Normal rainfall and snow events rarely lead to significant safety hazards. However, freezing conditions can lead to slippery roads and a higher risk of automobile accidents. Freezing weather, when coupled with power outages, can also leave residents unable to heat homes.



## Protecting Our Community

The lead agency responsible for addressing severe weather events and the impacts on the Yucaipa community is incident specific. Utility companies are responsible for service disruption from downed power lines or heat events. The fire department is responsible for wind-driven fires and provides sandbags to protect against rainfall and mudslides. The public works department is responsible for clearing downed trees that block streets. The police department would direct traffic in cases of downed or malfunctioning signals.

### GOAL S-5: SEVERE WEATHER

Minimize the impacts of severe weather conditions on residents, businesses, and visitors.

#### Policies

- S-5.1 Wind Protective Features.** Promote the installation of protective wind barriers on homes and buildings, such as vegetation walls, glass panel windscreens, roof clips, hedges, or rows of trees.
- S-5.2 Public Trees and Vegetation.** Maintain trees and vegetation in public rights-of-way and close to critical facilities (e.g., police, fire, hospital facilities) and utility lines to lessen tree failure and property damage risks.
- S-5.3 Signage.** Require all signage and moving structures susceptible to high wind damage to be tied down appropriately, or brought down or covered when high wind alerts are in effect.
- S-5.4 Roadway Closures.** Close down non-essential roadways and redirect traffic onto other routes during thunderstorms, torrential rain, or snow/freezing conditions where warranted to protect the public.
- S-5.5 Cooling Centers.** Designate public buildings or specific private buildings with air conditioning as public cooling shelters; extend hours at air-conditioned sites during periods of extreme heat and power outage.
- S-5.6 Storms.** Continue to provide access to flood protection resources and services (signage, sandbags, etc.) as feasible at designated public facilities during and after extreme weather events.
- S-5.7 Public Education.** Educate the community about the importance of regular tree maintenance near structures and power lines to minimize risk of downed trees, branches, and power lines during windstorms.





*Interstate 10 is the primary source of noise and vibration in southwest Yucaipa.*

## NOISE AND VIBRATION

Noise is defined as unwanted sound. From the rumbling of trucks on the roadways to the whine of leaf blowers on a quiet morning, noise and vibration can interrupt our conversations, thoughts, and leisure. Many excessive sources of noise (e.g., freeways) are also often accompanied by vibration. Noise and vibration sensitivity varies throughout the day or evening, at different locations, and among receptors. Despite these variations, most people agree that noise and vibration adversely affect health and well-being.

Unlike most cities in southern California, Yucaipa is far from many urban noise sources—airports, railroads, and heavy industry. Yet Yucaipa’s noise and vibration environment still varies throughout the community. While the North Bench and Wildwood Canyon have more localized noise sources, commercial centers or business districts experience higher levels of noise from business, roads, and traffic. Interstate 10 is the largest source of noise and vibration, the contours of which extend for some distance from the freeway.

### Measuring Noise and Vibration

Noise is a complex subject and can be measured in different ways. Noise is measured by an A-weighted sound pressure level, or dBA, which accounts for sound pressure level, the pitch of sound, and the way the human ear responds to both pressure and pitch. CNEL is the average sound level over a 24-hour period, with a penalty of 5 dB added from 7 pm to 10 pm and a penalty of 10 dB added for the hours of 10 pm to 7 am. Details on noise fundamentals are found in the noise study conducted for the General Plan update.

Vibration is an oscillatory motion through a solid medium in which the motion’s amplitude can be described in terms of displacement, velocity, or acceleration. Vibration is normally associated with activities such as railroads or vibration-intensive stationary sources, but can also be associated with construction equipment such as jackhammers, pile drivers, and hydraulic hammers. Heavy trucks can also generate significant levels of ground borne vibrations. Potholes, pavement joints, and uneven pavement surfaces can increase the vibration from passing vehicles.

Noise and vibration levels do not affect all land uses or people equally. Certain land uses are more sensitive to levels of noise and vibration. For example, residential, school, health care facilities, and open space/recreation areas (where quiet environments are necessary for enjoyment, health, and safety) are more sensitive to noise. Generally, commercial and industrial uses are not considered noise- and vibration-sensitive uses unless the interior level of noise and vibration exceeds state or federal occupational standards.

## Land Use Planning and Compatibility

Yucaipa is responsible for protecting residents and visitors from unacceptable noise and vibration. **Table S-3** shows that the City requires specific land uses to achieve an interior noise level of 45–50 dBA and exterior noise level of 60–65 dBA depending on land use. When non-transportation sources are the primary noise source, the City also uses hourly standards. These standards are intended to ensure that land uses within Yucaipa are compatible and do not detract from quality of life due to unacceptable levels of noise.

**Table S-3 Land Use–Noise Compatibility Standards**

| Category      | Land Uses                           | Ldn (or CNEL), dB |          |
|---------------|-------------------------------------|-------------------|----------|
|               |                                     | Interior          | Exterior |
| Residential   | Single and Multi-family Duplex      | 45                | 60*      |
|               | Mobile Home                         | 45                | 60*      |
|               | Hotel, Motel, Lodging               | 45                | 60*      |
| Commercial    | Commercial Retail, Bank, Restaurant | 50                | ---      |
|               | Office Building, R&D, Offices       | 45                | 65       |
|               | Amphitheater, Auditorium, Theater   | 45                | ---      |
| Institutional | Hospital, School, Church, Library   | 45                | 65       |
| Open Space    | Park and Recreational Areas         | ---               | 65       |

Note: \*An exterior noise level up to 65 dBA will be allowed, provided exterior noise levels are substantially mitigated through the reasonable use of best available noise reduction technology and interior noise does not exceed 45 dBA with windows and doors closed.

Under the municipal code, no ground vibration is allowed which can be felt without the aid of instruments at or beyond the lot line, or which produces a particle velocity greater than or equal to two-tenths (0.2) inch per second measured at or beyond the lot line. Construction activities are generally exempt during working days.

### Future Noise Levels

Yucaipa’s predominant source of noise levels is transportation related. Based on noise measurements, projected noise levels were identified and calculated at buildout of the general plan and then compared with City standards to determine the most noise-impacted areas. Areas having an average day-night sound level ( $L_{dn}$ ) of 60 dBA (if residential) or 65 dBA or greater (less sensitive uses) were identified. **Figure S-6, Noise Hazard Overlay District**, shows the greatest future sources of noise will be roadways:

- + Sand Canyon
- + Yucaipa Boulevard
- + Avenue E
- + Live Oak Canyon
- + Oak Glen Road
- + Portions of 14<sup>th</sup> Street
- +
- + Colorado Road
- + County Line Road
- + Calimesa Boulevard
- + Bryant Street
- + Portions of 5<sup>th</sup> Street
- + Interstate 10



## Protecting Our Community

The state and federal government regulate sources of noise from transportation sources or the workplace. Therefore, the City works to control noise through the following programs and policies.

### Noise Insulation Standards

Yucaipa enforces State of California Noise Insulation Standards (California Administrative Code, Title 24) and Chapter 35 of the Uniform Building Code. These regulations specify that acoustical studies must be prepared for all new multiple-family projects, condominiums, hotels, and motels proposed for areas within the 60 CNEL contour. In accordance with noise insulation standards, project applicants must demonstrate that building design features can reduce interior noise levels to 45 CNEL or better.

### Noise Ordinance and Vibration Standards

The municipal code gives the City authority to regulate noise at its source (except transportation sources), protect noise-sensitive land uses, and regulate the level of vibration. The municipal code also specifies permitted periods for construction and grading activities to exceed specified noise thresholds, vibration thresholds, and exemptions where applicable. Construction activities typically have some level of exemption during working hours. These standards are also applicable to nontransportation sources of noise and vibration and periodic nuisances within the community.

### Noise Overlay District

Yucaipa applies a noise hazard overlay district to areas where the  $L_{dn}$  is 65 dBA CNEL or greater. For new projects, the 60-dBA CNEL contour represents areas in which proposed noise sensitive land use should be evaluated. Projects should strive to meet the 60-dBA CNEL noise standard. An exterior noise level of up to 65 dBA CNEL will be allowed for new projects, provided exterior noise levels have been substantially mitigated through the reasonable application of the best available noise reduction technology and interior noise exposure does not exceed 45 dBA with windows and doors closed.

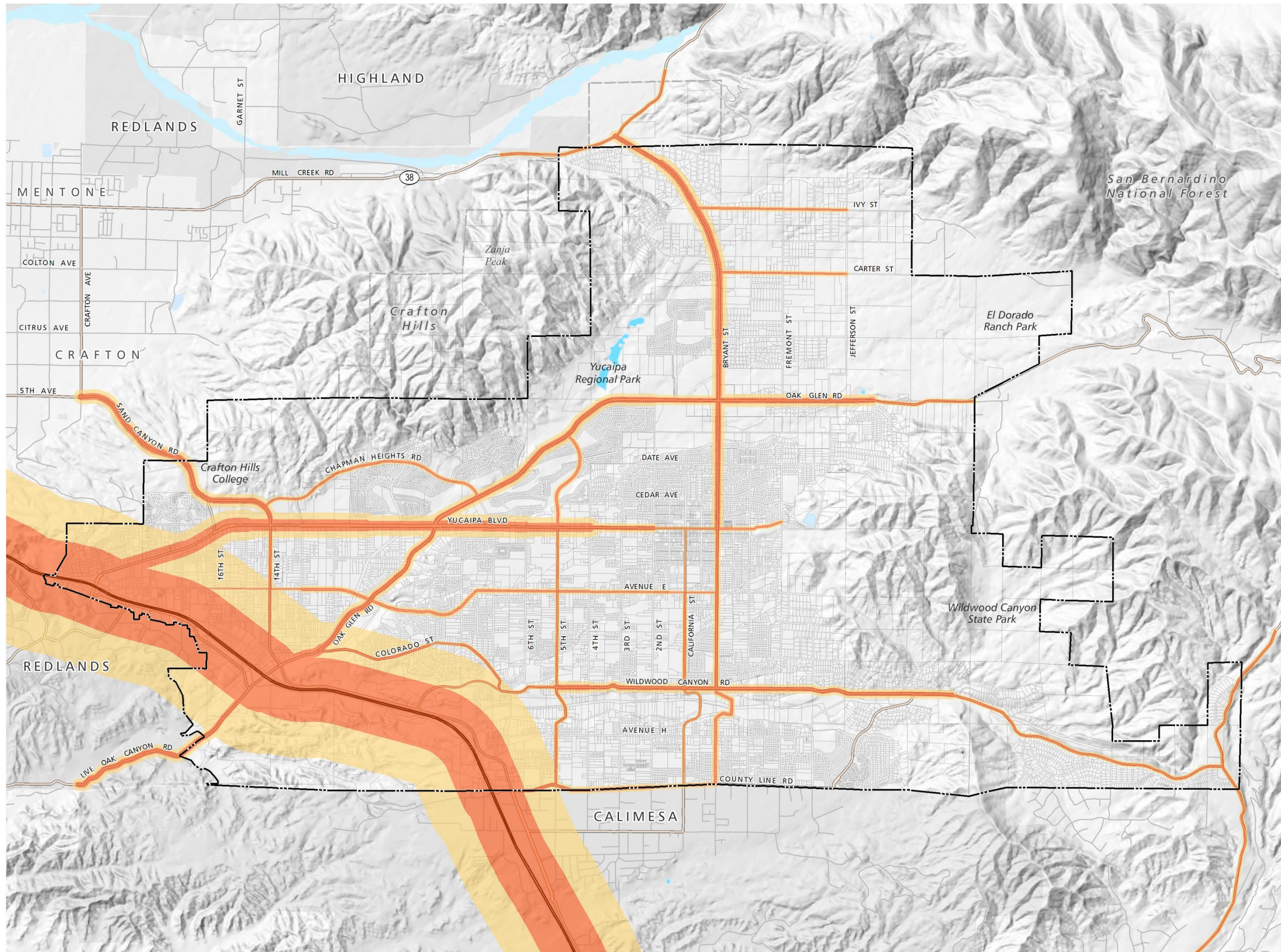
### Land Use Planning

To ensure land use compatibility, City programs focus on reducing noise and vibration levels by shielding the receiver, thus interrupting the path of noise and vibration. This is achieved by three means: 1) proactive land use planning that separates potentially incompatible uses; 2) building design and site planning; and 3) reducing noise and vibration from the freeway and roadways through appropriate barriers (e.g., walls, landscaping, berms, and other appropriate techniques). Sound walls should be the last resort after all other practical design-related noise and vibration reduction measures have been undertaken.





Figure S-6  
**NOISE HAZARD  
OVERLAY DISTRICT**



City Limits  
 Yucaipa Sphere of Influence  
**Overlay Designation**  
 60 dBA future noise level  
 65+ dBA future noise level



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## GOAL S-6: NOISE AND VIBRATION SAFETY

Appropriate community noise and vibration levels that balance the need for peaceful environments for sensitive land uses with the needs of local businesses and regional land uses.

### Policies

- S-6.1 Noise Assessment.** Assess the compatibility of proposed land uses with the noise environment when preparing, revising, or reviewing applications for development projects or land use changes.
- S-6.2 Acoustical Studies.** Require acoustical studies for proposed projects within areas that exceed 60 dBA; discourage siting of new noise-sensitive uses in areas exceeding 65 dBA without appropriate mitigation.
- S-6.3 Noise Insulation and Vibration Standards.** Require new projects to comply with noise insulation and vibration reduction standards in local, regional, state, and federal regulations, as applicable.
- S-6.4 Noise Nuisance Standards.** Regulate the control of residential noise nuisances—such as parties, barking dogs, other animals, and limited agricultural operations—through the City's municipal code.
- S-6.5 Development Patterns.** Locate new development in areas where noise levels are appropriate for the use. Limit development of noise-producing uses adjacent to noise-sensitive receptors and require that noise-producing land uses have adequate mitigation.
- S-6.6 Land Use-Noise Compatibility.** Require mitigation of exterior and interior noise to the levels in Table S-1. Encourage the use of building design, site planning, landscaping, and other features to reduce noise levels.
- S-6.7 Vibration Reduction.** Minimize vibration impacts from construction sites, roadways, and other sources with a combination of setbacks, structural design features, and operational regulations as appropriate.
- S-6.8 Street Improvements to Reduce Noise.** Employ noise mitigation practices and materials when designing or improving streets; emphasize use of natural buffers or setbacks between roads and noise-sensitive areas.



## AIR QUALITY AND CLIMATE CHANGE

Recent years have seen increasing awareness of how human activities affect the environment. Industrial activities, transportation, and other activities primarily using fossil fuels are known to release pollutants, carbon dioxide, and other gases into the atmosphere. The cumulative effect of these activities has been twofold: air pollution and a global “greenhouse” effect.

### Air Quality

Air pollution has long been a health concern in Southern California. Smog is the term used to describe air pollutants, including ground-level ozone (smog’s main ingredient), particulate matter, carbon monoxide, and nitrogen oxide. When released to the air, these gases react with each other in sunlight to produce smog. Ocean breezes then sweep the smog inland, where warmer air traps the smog close to the ground where people live and breathe.

San Bernardino County has long experienced poor air quality. Just 25 years ago, 60% of all days in San Bernardino County had unhealthy air quality in 1990. Since then, stringent regulations implemented by the South Coast Air Quality Management District and technological advances have led to significant improvements in air quality. In 2015, only 30% of the days each year in San Bernardino County have unhealthy air quality.

Southern California is now in compliance with state and federal standards for many criteria pollutants: carbon monoxide (CO), nitrogen oxides (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), and lead (Pb). However, the region continues to be in severe and/or extreme nonattainment status for particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), and ozone (O<sub>3</sub>). The City’s primary source of air pollution is ozone (O<sub>3</sub>), while other areas in the County also have high levels of particulate matter.

Even at today’s levels, poor air quality continues to affect health. Breathing ozone can trigger chest pain, coughing, throat irritation, and congestion. It can worsen bronchitis, emphysema, and asthma. Ground-level ozone also can reduce lung function, inflame lung linings, and even permanently scar lung tissue. Ozone is also known to affect sensitive vegetation and ecosystems, including forests, wildlife refuges, and wilderness areas.

Several regulatory agencies are involved in improving air quality. The South Coast Air Quality Management District (SCAQMD) is responsible for assuring that the ambient air quality standards are attained and is responsible for promulgating regulations for stationary sources. The California Air Resources Board focuses its air pollution activities on air pollution emanating from transportation sources—vehicles, trucks, railroads, and marine vessels. The federal Environmental Protection Agency regulates airplane emissions.



## Climate Change

Just as air pollution adversely affects health, it also affects climate. The Earth's temperature depends on a balance between incoming energy from the sun, and outgoing energy that is radiated to space as heat. Atmospheric greenhouse gases (GHGs), such as carbon dioxide, methane, nitrous oxide, and other gases trap energy and prevent heat from escaping into the atmosphere. The cumulative impact of millions of GHG-generating activities affects this balance.

The reduction in the release of heat back into the atmosphere has been credited with global warming. The consequences of climate change are hard to predict. Globally, impacts could include warmer temperatures, decreasing snow pack, sea level rise, and impacts on water resources, wildlife, habitat, and agricultural production. However, according to the California EPA, even if actions were taken to significantly curtail GHG emissions, the built-up emissions in the atmosphere would result in some level of climate warming.

The California Assembly Bill 32 (AB 32) and the California Global Warming Solutions Act have attempted to address climate change issues in a comprehensive manner. On the federal government level, the courts have ruled that GHGs are a source of pollution that is covered under the Clean Air Act. As such, state and federal statutes have been expanded to cover a diverse set of topics, such as land use and transportation, energy and renewables, water efficiency and conservation, and waste and recycling.

Yucaipa contributes to the production of greenhouse gas emissions in a variety of direct and indirect ways. Like most jurisdictions in southern California, the City of Yucaipa's greenhouse gas emissions are predominantly the result of five activities: building energy usage, on-road transportation sources (e.g., vehicles), off-road equipment, solid waste management, and wastewater and water services. Consequently, these five areas also represent the best and most productive opportunities for reducing greenhouse gas reductions to meet the City's mandated targets.

SANBAG's Regional Reduction Plan contains a regional assessment of GHG generation and programs for jurisdictions to implement that collectively achieve reductions in regional GHGs. Building off the regional plan, Yucaipa's Climate Action Plan presents the greenhouse gas inventories and sets forth local measures to reduce GHG emissions under the City's jurisdictional control to achieve the City's reduction targets. The CAP is based upon the Regional Reduction Plan, but has been revised to accommodate the growth projections for 2020 from the proposed 2015 General Plan update.



## Protecting Our Community

The City of Yucaipa has adopted a number of plans and regulations that attempt to improve air quality in the community, reduce hazards for residents, and address requirements in state and federal law. These programs are summarized below.

### Climate Action Plan

The City of Yucaipa has adopted a Climate Action Plan (CAP) to address requirements under the California Global Warming Solutions Act of 2006. The CAP presents the greenhouse gas (GHG) inventory for Yucaipa, identifies the effectiveness of California, regional, and countywide initiatives to reduce GHG emissions, and concludes with City strategies to achieve GHG targets for Yucaipa. The General Plan Environmental Impact Report contains mitigation measures that are being followed through the duration of the general plan to reduce GHG emissions as required by state law.

### Public Nuisance Ordinances

If it is determined during project-level environmental review that a project has the potential to emit nuisance odors beyond the property line, the City has the authority to require odor management plans. Such facilities could include, but are not limited to wastewater treatment, composting or recycling, painting/coating operations, food processing facilities, and other such businesses. Commercial poultry ranches must also have an approved manure management plan to control odors and associated public nuisances. Odor management plans shall identify best available control technologies to reduce odors.

### Land Use Planning

Air pollution is most acute near freeways, industrial areas, diesel truck routes, and busy/congested roadways. As such, CARB recommends that “sensitive land uses” such as residences, care facilities, schools, day-care centers, playgrounds, or medical facilities not be located near major sources of pollution. The General Plan provides policies to avoid placing sensitive land uses near sources of air pollution without the preparation of a health risk assessment (HRA). Similarly, qualified polluting industries that are relocating to or expanding must also prepare required HRA prior to approval of local permits.

The following goal and policies are intended to support local and regional goals to improve air quality and mitigate climate change.



## GOAL S-7: AIR QUALITY AND CLIMATE CHANGE

Clean and healthful air resources that promotes public health, protects the natural environment, and mitigates local impacts to climate change.

### Policies

- S-7.1 Integrated Planning.** Integrate air quality planning with land use, economic development, and transportation-related planning to allow for the control and management of air quality.
- S-7.2 Transportation Sources.** Encourage the expansion of transit, buildout of the pedestrian and bicycle route network, support of regional ride-share programs, and other efforts to reduce vehicle miles travelled from Yucaipa and associated vehicle emissions.
- S-7.3 Sensitive Land Uses.** Protect residents from health risks by avoiding the placement of sensitive uses and land uses generating high levels of pollutants within close proximity to one another. Appropriate distances shall be determined based on best available knowledge.
- S-7.4 Regional Cooperation.** Work with the South Coast Air Quality Management District, San Bernardino Association of Governments, local cities, and other agencies and stakeholders in implementing programs that reduce air pollution.
- S-7.5 Energy Usage.** Support the reduction and conservation of energy usage in residential and nonresidential buildings through adoption of building codes, promotion of energy-saving equipment, solar power, and other technology.
- S-7.6 Greenhouse Gas Reductions.** Reduce communitywide greenhouse gas emissions locally through the implementation of Yucaipa’s Climate Action Plan; actively support regional efforts to reduce greenhouse gases throughout the county.
- S-7.7 Open Spaces Preservation.** Continue to preserve and protect Yucaipa’s open natural spaces, maintain a community forest, and plant public landscaping to help filter air pollutants and improve air quality.
- S-7.8 Odor Management.** Work with businesses to address odors and associated potential public nuisances from operations; where permissible under state law, require odor management plans where needed to minimize odors resulting from business operations.



## SAFETY PROGRAMS

In accordance with Section 65302 of the Government Code, this section outlines feasible implementation actions that Yucaipa will undertake to achieve the goals, policies, and objectives in the Safety Element. **Table S-3** provides a summary of the objectives, timeframes, and implementation measures.

### 1. Drainage Master Plan

Historically, Yucaipa has been subject to intense flooding that has resulted in personal and economic damages in the community. In 1993, Yucaipa completed and adopted a master drainage plan (MPD) that specified \$90 million worth of improvements to its stormwater facilities, including spillover detention and desilting basins. Yucaipa's MPD assesses planned improvements to flood control channels and detention basins; desilting basins; flood channel stabilization; and improvements to drainage facilities and infrastructure needed to provide protection from flooding events.

**Action.** *Continue to implement projects identified in the Master Plan of Drainage; amend plan as needed to maintain accuracy and relevance for flood planning purposes.*

### 2. Flood Plain Safety Overlay District Map

Yucaipa's Floodplain Safety Overlay District identifies areas within the city that need additional protection from flooding hazards. In accordance with FEMA regulations, two flood risks were identified. Floodplain Review Area 1 (FP 1) includes areas subject to a 100-year flood. Floodplain Review Area 2 (FP 2) includes areas between the 100-year flood and subject to a 500-year flood. These maps are used for planning purposes, including prioritizing capital improvements to reduce flooding risks and requiring enhanced development regulations for properties within a review area.

**Action.** *Continue to update plan as capital improvement projects are completed, risks are identified or modified, or flood insurance rate map revisions are made.*

### 3. Building and Development Standards

The Yucaipa Municipal Code contains enhanced building codes and development standards for projects located within the floodplain. Enforcement of these codes is a precondition for FEMA to make available flood insurance policies for Yucaipa property owners and businesses. Development projects may be subject to FP 1 or FP 2 regulations, flooding studies, or other mitigation. In certain areas where flood risks have not been defined by FEMA, the City Engineer may require additional studies or mitigation.

**Action.** *Maintain the floodplain management ordinance in accordance with the National Flood Insurance Program and require adherence to the ordinance and state and federal laws.*





#### 4. Low Water Crossings

In 1999, the City Council adopted a resolution to prioritize projects that would eliminate low water crossings at several areas as a precondition for applying for federal grant funding to build bridges over the drainage channels and provide “all weather” crossing for traffic. These roads were always closed to traffic during significant storm events. Since then, the City has built bridges or completed “low water crossing replacements” at 5 locations and the City is currently in the design and/or environmental phase for 6 other locations. In 2015, the City Council approved service level options to budget for improvements at the remaining low water crossings.

**Action.** *Continue to implement low water crossing replacement projects identified in the City’s capital improvement program and authorizing ordinance.*

#### 5. Flood Management Projects

Yucaipa’s Master Plan of Drainage is the blueprint for how the City will protect the community from flooding through the construction of infrastructure. The City’s Master Plan of Drainage (MPD) provides an assessment of drainage and infrastructure needs and a plan for the construction of detention basins and facilities to protect from flooding hazards. Yucaipa’s Master Plan of Drainage is periodically updated, most recently in 2011 and 2008. Needed improvements to the City’s drainage system are included in the City’s capital improvement program and funded through the annual budget.

**Action.** *Continue the financing and construction of drainage improvements noted in the capital improvements program that are recommended in the Master Plan of Drainage.*

#### 6. Flood Infrastructure Maintenance

Yucaipa’s extensive network of drainage courses, detention basins, and storm drains requires periodic maintenance to minimize the potential for riverine and urban flooding. The San Bernardino Flood Control District is responsible for maintaining, cleaning, and repairing regional facilities, while the City is responsible for maintaining, cleaning, and repairing all local facilities. The California Department of Water Resources and County Flood Control are responsible for maintaining reservoirs in Yucaipa. To facilitate this maintenance effort, the County operates a master stormwater system maintenance program for regional facilities.

**Action.** *Maintain agreements to ensure proper clearing, maintenance, and repair of stormwater facilities, detention basins, and channels to protect against flooding.*



## 7. Fire Code Amendments

The City has adopted the latest edition of the California Fire Code, with all appendices. The City has also amended the code to address roadway and project access, fuel modification, brush clearance and vegetation management, building signage, and other features. Additional structural requirements have been added for projects in the fire review overlay district. These codes are generally consistent with regulations in the National Fire Protection Association, Board of Forestry and Fire Protection, Wildland-Urban Interface Code, etc. However, as conditions in Yucaipa and best practices change over time, a periodic review of City codes is warranted.

**Action.** Review and revise, if necessary, City fire codes to accommodate applicable regulations of the Board of Forestry and Fire Protection, state law, and best practices.

## 8. Fire Safety Overlay Districts

When Yucaipa incorporated in 1989, City leaders adopted portions of the County's Development Code, including fire safety overlay district requirements that are more stringent than most fire codes. Since then, the FR1 and FR2 overlay district requirements have been amended, but not in a comprehensive manner. Under state law, a city may adopt ordinances, rules, or regulations to provide fire prevention restrictions or regulations that are necessary or more stringent than state law to meet local fire conditions and needs. To implement the updated Safety Element, a comprehensive review of fire safety overlay district regulations is warranted. As part of the development of new Planned Development projects or Specific Plans within the FR1 district, include additional provisions that help improve the fire safety conditions, including the implementation of a fire protection plan.

**Action.** Review and revise, if necessary, local fire overlay district regulations to accommodate applicable regulations of the Board of Forestry and Fire Protection, state law, and best practices.

## 9. Water Supply for Wildland Areas

The City, CAL FIRE, and Yucaipa Valley Water District require that adequate water supplies be made available to address the water supply and fire flow needs for new development. However, citywide water supply standards have not been adopted for wildland areas. In wildland areas, CAL FIRE has access to emergency land use agreements, water tenders, and other provisions to supply water where needed. While CAL FIRE has the capability to address fire suppression needs in Very High Fire Hazard Severity Zone, the Board of Forestry and Fire Protection recommends that the City review standards (such as water supply standards for wildland areas) for consideration and incorporation.

**Action.** Review and revise, if necessary, local municipal codes to address water supply standards recommended by the Board of Forestry and Fire Protection.



## 10. Subdivision Map Requirements

As a condition of subdivision map approval, the City requires that: 1) subdivision design shall provide for safe and ready access for fire and other emergency equipment and evacuation routes; 2) the subdivision shall be served by water supplies for fire protection in accordance with designated standards; and 3) in hazardous fire areas, all flammable or combustible vegetation shall be removed from around all structures in accordance with the Fire Code. However, recently adopted codes (Government 66474.02) require additional findings to be made for the approval of a tentative or parcel map in Very High Fire Hazard Severity Zone.

**Action.** *Review and, if necessary, revise Yucaipa Municipal Code to incorporate criteria for tentative and parcel map approvals specified in Government Code 66474.02.*

## 11. Upgrade and Retrofit Program

Yucaipa's structures, streets, water infrastructure, and other features were built in accordance with fire, seismic, flooding, and other safety codes required at that time. The City strives to ensure that public buildings, roads, water infrastructure, and other features are built or retrofitted to meet required safety standards. However, there may be a need to retrofit older structures, buildings and infrastructure outside the purview of City responsibility, such as privately owned mobile homes, buildings, water facilities, and other infrastructure. The City will continue to explore options for grants, loans, and/or other funding mechanisms to address buildings, structures, and facilities needing upgrade.

**Action.** *Continue to upgrade public facilities in compliance with state and federal law. Explore grants, loans, and other mechanisms to encourage the retrofit of privately owned structures, buildings, infrastructure, and other features to meet current safety codes.*

## 12. Hazard Mitigation/Emergency Operations Plan Update

Yucaipa prepares and implements a Hazard Mitigation Plan (HMP) and Emergency Operations Plan (EOP) to protect the community from disasters. Both plans are updated regularly in accordance with state and federal law. The Safety Element identified potential evacuation routes, depending on the hazard. To address other changing requirements, future updates of the EOP, HMP, and Safety Element will ensure that policies, procedures, and protocols will be mutually supportive and consistent with one another.

**Action.** *Review and, if necessary, revise the HMP and EOP to address protocols, procedures, and mapping for evacuation routes and overlay districts. Update the safety element as required to incorporate climate change and resiliency strategies from the HMP and revisions to the EOP that are made in subsequent updates.*



**Table S-4 Safety Implementation Programs**

| Programs  | Implementation Actions and Progress  |                                |                             |  |
|---|--|--------------------------------|-----------------------------|--|
|   | Action   | Funding Source                 | Responsible Party           | Time Frame                                 |
| Program #1:<br>Drainage Master Plan                         | Continue to implement projects identified in the Master Plan of Drainage; amend plan as needed to maintain accuracy and relevance for flood planning purposes.   | General Fund;<br>Drainage Fees | Yucaipa ED                  | Ongoing                                    |
| Program #2:<br>Floodplain Safety Overlay District Map       | Continue to update plan as capital improvement projects are completed, risks are identified or modified, or flood insurance rate map revisions are made.   | General Fund;<br>Drainage Fees | Yucaipa ED                  | Ongoing                                    |
| Program #3:<br>Building and Development Standards           | Maintain the floodplain management ordinance in accordance with the National Flood Insurance Program and require adherence to the ordinance and state and federal laws.  | General Fund                   | Yucaipa ES                  | As part of triennial update                |
| Program #4:<br>Low Water Crossing                           | Continue to implement low water crossing replacement projects identified in the City's capital improvement program and authorizing ordinance.  | General Fund                   | Yucaipa ED                  | 2016–2025                                  |
| Program #5:<br>Flood Management projects                    | Continue the financing and construction of drainage improvements noted in the capital improvements program and recommended in the Master Plan of Drainage.   | General Fund                   | Yucaipa ED                  | Ongoing                                    |
| Program #6:<br>Flood Infrastructure Maintenance             | Maintain agreements to ensure proper clearing, maintenance, and repair of stormwater facilities, detention basins, and channels to protect against flood.  | General Fund                   | Yucaipa PWD                 | Ongoing                                    |
| Program #7:<br>Fire Code Amendment                          | Review and revise, if necessary, city fire codes to accommodate applicable regulations of the Board of Forestry and Fire Protection, state law, and best practices.  | General Fund                   | Yucaipa DSD<br>Yucaipa Fire | As part of triennial update                |
| Program #8:<br>Fire Safety Overlay District                 | Review and revise, if necessary, fire overlay district regulations to address applicable regulations of the Board of Forestry and Fire Protection, state law, and best practices.  | General Fund                   | Yucaipa DSD<br>Yucaipa Fire | As part of triennial update                |
| Program #9:<br>Water Supply for Wildland Areas              | Review and revise, if necessary, local municipal codes to accommodate water supply standards recommended by the Board of Forestry and Fire Protection.   | General Fund                   | Yucaipa DSD<br>Yucaipa Fire | Ongoing                                    |
| Program #10:<br>Subdivision Map Act Requirements            | Review and, if necessary revise, Yucaipa Municipal Code to incorporate criteria for tentative and parcel map approvals specified in Government Code 66474.02.  | General Fund                   | Yucaipa DSD                 | Ongoing – add more Development Code Update |
| Program #11:<br>Upgrade and Retrofit Program                | Continue to upgrade public facilities in compliance with state and federal law. Explore grants, loans, and other mechanisms to encourage the retrofit of privately owned structures, buildings, infrastructure, and other features to meet current safety codes.   | General Fund                   | Yucaipa DSD                 | Ongoing                                    |
| Program #12:<br>Mitigation/Emergency Operations Plan Update | Review and, if necessary, revise the HMP and EOP to address protocols, procedures, and mapping for evacuation routes and overlay districts. Update the safety element to incorporate climate change and resiliency strategies from the HMP and revisions to the EOP that are made in subsequent updates. | General Fund                   | Yucaipa CCD                 | As required by state and federal law       |



