

# City of Yucaipa

## CAL FIRE Land Use Planning

### General Plan Safety Element Assessment Tier 1

October 22, 2015

Board of Forestry and Fire Protection



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| Jurisdiction:<br>CSR      | Notes:                             | CAL FIRE Unit:<br>San Bernardino (BDU) | Date Received:<br>10/19/2015 |
| County:<br>San Bernardino | LUPP Reviewer:<br>Raymond Martinez | Unit Contact:<br>BC Janssen            | Date Reviewed:<br>10/20/2015 |

May 2015

**Purpose and Background:** The State Board of Forestry and Fire Protection (Board) is required to review and make recommendations for the safety element of general plan updates in accordance with Government Code (GC) 65302.5. The review and recommendations apply to those general plans with State Responsibility Area (SRA) (Public Resources Code (PRC) 4125) or Very High Fire Hazard Severity Zone Local Responsibility Area (VHFHSZ LRA) (GC 51177(i), PRC 4125).

The statutory requirements for the Board review and recommendations pursuant to GC 65302.5 (a)(1) and (2), and (b) are as follows:

- *“The draft elements...to the fire safety element of a county’s or a city’s general plan...shall be submitted to the Board at least 90 days prior to... the adoption or amendment to the safety element of its general plan [for each county or city with SRA or VHFHSZ].”*
- *“The Board shall... review the draft or an existing safety element and report its written recommendations to the planning agency within 60 days of its receipt of the draft or existing safety element....”*
- *“Prior to adoption of the draft element..., the Board of Supervisors... shall consider the recommendations made by the Board... If the Board of Supervisors...determines not to accept all or some of the recommendations..., the Board of Supervisors... shall communicate in writing to the Board its reasons for not accepting the recommendations.”*

**Methodology for Review and Recommendations:** The Board established a standardized method to review the safety element of general plans. The methodology includes 1) examining the safety element for inclusion of factors that are important for mitigation of wildfire hazard and risks, and 2) making recommendations related to these factors. The evaluation factors and recommendations below were developed using CAL FIRE technical documents and input from local fire departments.

Enclosed is the most expansive set of recommendations suggested by the Board, known as a Tier 1 Assessment. These recommendations are directed at communities that include:

- Overall high population densities; or
- High proportion of SRA or 20% or more of a city’s acreage is VHFHSZ LRA; or
- Population centers in or adjacent to VHFHSZ SRA, if there is no designated VHFHSZ LRA in the county; or
- Within the context of neighboring jurisdictions, the location of VHFHSZ in the jurisdiction creates an overall picture of contiguous fuels that threaten population or economic centers.

As local fuels, boundaries, populations, and other variables change throughout time, Board staff have the discretion to re-assign a jurisdiction into a lower or higher assessment tier. Staff will consider:

- Variations in population and population density; or
- Changes in proportion of land designated VHFHSZ (lower or higher); or
- Firefighting capabilities (paid, volunteer, equipment, etc) and contract changes; or

- Past planning efforts and involvement of organizations such as local Fire Safe Councils and new initiatives or efforts that have emerged over time; or
- Changes to the context of VHFHSZ within the region – does the VHFHSZ in a jurisdiction combine with neighboring fuels to create a continual pattern of very high fire risk in a way that it hadn't previously?

A full list of communities to be evaluated under Tier 1 are listed below.

### Counties (alphabetical)

|              |             |                |                 |            |
|--------------|-------------|----------------|-----------------|------------|
| Alameda      | Glenn       | Monterey       | San Diego       | Solano     |
| Alpine       | Humboldt    | Napa           | San Joaquin     | Sonoma     |
| Amador       | Kern        | Nevada         | San Luis Obispo | Stanislaus |
| Butte        | Lake        | Orange         | San Mateo       | Tehama     |
| Calaveras    | Lassen      | Placer         | Santa Barbara   | Trinity    |
| Alameda      | Los Angeles | Plumas         | Santa Clara     | Tulare     |
| Alpine       | Madera      | Riverside      | Santa Cruz      | Tuolumne   |
| Contra Costa | Marin       | Sacramento     | Shasta          | Ventura    |
| Del Norte    | Mariposa    | San Benito     | Sierra          | Yolo       |
| El Dorado    | Mendocino   | San Bernardino | Siskiyou        | Yuba       |
| Fresno       |             |                |                 |            |

### Cities (alphabetical by county)

|                     |                          |                        |                        |                      |
|---------------------|--------------------------|------------------------|------------------------|----------------------|
| <b>Alameda</b>      | <b>Los Angeles con't</b> | <b>Napa</b>            | <b>Riverside con't</b> | <b>San Mateo</b>     |
| Oakland             | Glendale                 | Calistoga              | Lake Elsinore          | Hillsborough         |
| <b>Butte</b>        | Glendora                 | <b>Nevada</b>          | Murrieta               | San Carlos           |
| Paradise            | Hidden Hills             | Calistoga              | <b>San Bernardino</b>  | Woodside             |
| <b>Contra Costa</b> | Irwindale                | Grass Valley           | Big Bear Lake          | <b>Santa Barbara</b> |
| El Cerrito          | La Canada Flintridge     | Nevada City            | Colton                 | Santa Barbara        |
| Lafayette           | La Habra Heights         | Truckee                | Grand Terrace          | <b>Santa Clara</b>   |
| Orinda              | La Verne                 | <b>Orange</b>          | Highland               | Los Gatos            |
| Richmond            | Los Angeles              | Aliso Viejo            | Loma Linda             | Monte Sereno         |
| <b>El Dorado</b>    | Malibu                   | Anaheim                | Rancho Cucamonga       | Saratoga             |
| Placerville         | Monrovia                 | Brea                   | Redlands               | <b>Shasta</b>        |
| South Lake Tahoe    | Palmdale                 | Laguna Beach           | San Bernardino         | Redding              |
| <b>Lake</b>         | Palos Verdes Estates     | Laguna Niguel          | Yucaipa                | Shasta Lake          |
| Clearlake           | Pasadena                 | Lake Forest            | <b>San Diego</b>       | <b>Siskiyou</b>      |
| <b>Los Angeles</b>  | Rancho Palos Verdes      | Newport Beach          | Encinitas              | Dunsmuir             |
| Agoura Hills        | Rolling Hills            | Rancho Santa Margarita | Escondido              | Fort Jones           |
| Avalon              | Rolling Hills Estates    | San Clemente           | Poway                  | Mount Shasta         |
| Azusa               | San Dimas                | Yorba Linda            | San Diego              | Weed                 |
| Beverly Hills       | Santa Clarita            | <b>Placer</b>          | San Marcos             | <b>Tuolumne</b>      |
| Bradbury            | Sierra Madre             | Colfax                 | Santee                 | Sonoma               |
| Burbank             | Westlake Village         | <b>Plumas</b>          | <b>San Luis Obispo</b> | <b>Ventura</b>       |
| Calabasas           | Whittier                 | Portola                | Atascadero             | Moorpark             |
| Claremont           | <b>Marin</b>             | <b>Riverside</b>       | Pismo Beach            | Ojai                 |
| Diamond Bar         | Mill Valley              | Banning                | <b>San Mateo</b>       | Simi Valley          |
| Duarte              | <b>Monterey</b>          | Beaumont               | Belmont                | Thousand Oaks        |
|                     | Carmel                   | Calimesa               | Half Moon Bay          |                      |

## Review Process and Timeline

The county/local jurisdiction and CAL FIRE Land Use Planning staff will receive and review technical guidance documents, the Board assessment, and relevant information from CAL FIRE and the Governor's Office of Planning and Research.



The county or local jurisdiction will work closely with CAL FIRE Land Use Planning staff during the development of the general plan and the safety element in particular.



**At least 90 days prior to the adoption or amendment of the General Plan:** The county or local jurisdiction will submit the safety element to the Board of Forestry & Fire Protection for review. Jurisdictions are encouraged to send safety elements to the Board prior to the 90 day statutory requirement for greater collaboration.



**No more than 60 days later:** The Board will consider staff recommendations and approve as-is or with changes at the next Board meeting. This deadline may be modified upon mutual agreement between Board staff and local jurisdictions.

# Tier 1 General Plan Safety Element Recommendations

Please click on the appropriate box to “check” whether the plan satisfies each point. Standard recommendations are included in the checklist but please highlight or add additional comments as necessary.

## 1.0 Wildfire Protection Planning

1.1 General Plan references and incorporates County or Unit Fire Plan. Yes Partial No

**Recommendation:** Identify, reference or create (if necessary) a fire plan for the geographic scope of the General Plan. General Plan should incorporate the general concepts and standards from any county fire plan, fire protection agency (federal or state) fire plan, and local hazard mitigation plan. Identify or reference the local Unit Fire Plan and, if applicable, the Community Wildfire Prevention Plan.

**Priority:** High  Medium  Low N/A This information is located within the unit fire plan.

**Recommendation:** Ensure fire plans incorporated by reference into the General Plan contain evaluations of fire hazards, assessment of assets at risk, prioritization of hazard mitigation actions, and implementation and monitoring components.

**Priority:** High  Medium  Low N/A

## 2.0 Land Use Planning:

2.1 Goals and policies include mitigation of fire hazard for future development. Yes Partial No

**Recommendation:** Establish goals and policies for specific ordinances addressing evacuation and emergency vehicle access; water supplies and fire flow; fuel modification for defensible space; and home addressing and signing.

**Priority:** High  Medium  Low  N/A City will be looking into adding this to a future update.

**Recommendation:** Specify the local ordinances, code sections, or regulations addressing the above standards, particularly any ordinances that address right-of-way, easement, and other reasonable offsite and onsite improvements for a division of land which qualifies for a Parcel Map rather than a Tentative/Final Map under the Subdivision Map Act.

**Priority:** High  Medium  Low N/A

**Recommendation:** Develop fire safe development codes used as standards for fire protection for new development in State Responsibility Area (SRA) within the entity’s jurisdiction that meet or exceed statewide standards in Title 14 California Code of Regulations Section 1270 et seq.

**Priority:** High  Medium  Low N/A

**Recommendation:** Adopt, and have certified by the BOF, local fire safe ordinances which meet or exceed standards in 14 CCR § 1270 for State Responsibility Area.

**Priority:** High  Medium  Low N/A

**Recommendation:** Consider mitigation of previously developed areas that do not meet Title 14 California Code of Regulations Section 1270 et seq. or equivalent local ordinance.

**Priority:**  High  Medium  Low  N/A

- 2.2 Disclose wildland urban interface hazards, including Fire Hazard Severity Zone designations and other vulnerable areas as determined by CAL FIRE or fire prevention organizations. Describe or map any Firewise Communities or other firesafe communities as determined by the National Fire Protection Association, Fire Safe Council, or other organizations.  Yes  Partial  No

**Recommendation:** Specify whether the entity has a Very High Fire Hazard Severity Zones (VHFHSZ) designation pursuant GC 51175 and include a map of the zones that clearly indicates any area designated VHFHSZ.

**Priority:**  High  Medium  Low  N/A **Located in safety element and supporting documentation.**

**Recommendation:** Adopt CAL FIRE recommended Fire Hazard Severity Zones including model ordinances developed by the Office of the State Fire Marshal for establishing VHFHSZ areas.

**Priority:**  High  Medium  Low  N/A

**Recommendation:** Discuss and/or include local fire hazard maps.

**Priority:**  High  Medium  Low  N/A **Information is located in the FR1 and FR2 overlay information within the safety element and supporting documentation.**

- 2.3 The design and location of new development provides for adequate infrastructure for the safe ingress of emergency response vehicles and simultaneously allows civilian egress during an emergency:  Yes  Partial  No

**Recommendation:** Develop a policy that approval of parcel maps and tentative maps is conditional based on meeting regulations adopted pursuant to §4290 and 4291 of the Public Resources Code, particularly those regarding road standards for ingress, egress, and fire equipment access.

**Priority:**  High  Medium  Low  N/A

**Recommendation:** Develop pre-plans for fire prone areas that address civilian evacuations to temporary safety locations.

**Priority:**  High  Medium  Low  N/A **This is in process and ongoing for future update.**

- 2.4 When approving parcel maps and use permits, considerations are given to providing adequate water supply infrastructure that meets zoning and fire protection needs.  Yes  Partial  No

**Recommendation:** Develop a policy that approval of parcel maps is conditional based on meeting zoning requirements and fire safe development codes.

**Priority:**  High  Medium  Low  N/A

### 3.0 Housing/Structures and Neighborhoods:

3.1 Incorporation of current fire safe building codes.  Yes  Partial  No

**Recommendation:** Adopt building codes for new development in State Responsibility Areas or incorporated areas with VHFHSZ that are based on those established by the Office of the State Fire Marshal in Title 19 and Title 24 CCR, referred to as the “Wildland Urban Interface Building Codes.”

**Priority:**  High  Medium  Low  N/A

3.2 Identification and actions for substandard fire safe housing and neighborhoods relative to fire hazard area.  Yes  Partial  No

**Recommendation:** Identify and map existing housing structures that do not conform to contemporary fire standards in terms of building materials, perimeter access, and vegetative hazards in VHFHSZ or SRA by fire hazard zone designation.

**Priority:**  High  Medium  Low  N/A

**Recommendation:** Identify plans and actions to improve substandard housing structures and neighborhoods. Plans and actions should include structural rehabilitation, occupancy reduction, demolition, reconstruction, neighborhood –wide fuels hazard reduction projects, community education, and other community based solutions.

**Priority:**  High  Medium  Low  N/A

**Recommendation:** Identify plans and actions for existing residential structures and neighborhoods, and particularly substandard residential structures and neighborhoods, to be improved to meet current fire safe ordinances pertaining to access, water flow, signing, and vegetation clearing.

**Priority:**  High  Medium  Low  N/A

3.3 Consideration of diverse occupancies and their effects on wildfire protection.

Yes  Partial  No **There is a partial plan in place located in the Hazard Mitigation Plan as well as safety element specifically FR1 and FR2 overlays.**

**Recommendation:** Ensure risks to uniquely occupied structures, such as seasonally occupied homes, multiple dwelling structures, or other structures with unique occupancy characteristics, are considered for appropriate and unique wildfire protection needs.

**Priority:**  High  Medium  Low  N/A

3.4 Fire engineering features for structures in VHFHSZ.  Yes  Partial  No

**Recommendation:** Ensure new development proposals contain specific fire protection plans, actions, and codes for fire engineering features for structures in VHFHSZ. Examples include codes requiring automatic sprinklers in VHFHSZ.

**Priority:**  High  Medium  Low  N/A **Located within the fire code, ordinance, Fire Hazard Overlay information.**

#### 4.0 **Conservation and Open Space:**

4.1 Identification of critical natural resource values relative to fire hazard areas.  Yes  Partial  No

**Recommendation:** Identify critical natural resources and other “open space” values within the geographic scope of the General Plan.

**Priority:**  High  Medium  Low  N/A **City will look into this area with staff to address possible future implementation.**

4.2 Inclusion of resource management activities to enhance protection of open space and natural resource values.  Yes  Partial  No

**Recommendation:** Develop plans and action items for vegetation management that provides fire damage mitigation and protection of open space values. Plans should address protection of natural resource financial values, establishment of fire resilient natural resources, protection of watershed qualities, and protection of endangered species habitats. Actions should consider prescribed burning, fuel breaks, and vegetation thinning and removal

**Priority:**  High  Medium  Low  N/A **Partially in the open space element. Mr. Lambert stated he would add this to a future meeting to address with staff for possible implementation plan.**

**Recommendation:** Establish goals and policies for reducing the wildland fire hazards within the entity’s boundaries, especially on vacant residential lots and greenbelts and, with the relevant partners, on adjacent private wildlands or federal lands with fire hazards that threaten the entity’s jurisdiction.

**Priority:**  High  Medium  Low  N/A

4.3 Integration of open space into fire safety effectiveness.  Yes  Partial  No

**Recommendation:** Establish goals and policies for incorporating systematic fire protection improvements for open space. Specifics policies should address facilitation of safe fire suppression tactics, standards for adequate access for firefighting, fire mitigation planning with agencies/private landowners managing open space adjacent to the GP area, water sources for fire suppression, and other fire prevention and suppression needs.

**Priority:**  High  Medium  Low  N/A

4.4 Urban forestry plans relative to fire protection.  Yes  Partial  No

**Recommendation:** Ensure residential areas have appropriate fire resistant landscapes and discontinuous vegetation adjacent to open space or wildland areas.

**Priority:**  High  Medium  Low  N/A

**Recommendation:** Evaluate and resolve existing laws and local ordinances which conflict with

fire protection requirements. Examples include conflicts with vegetation hazard reduction ordinances and listed species habitat protection requirements.

**Priority:**  High  Medium  Low  N/A

- 4.5 Mitigation for unique pest, disease and other forest health issues leading to hazardous situations.  Yes  Partial  No

**Recommendation:** Establish goals and policies that address unique pest, disease, exotic species and other forest health issues in open space areas for purposes of reducing fire hazard and supporting ecological integrity.

**Priority:**  High  Medium  Low  N/A City is currently working on these policies and goal and the process is slated to be completed in 2016

## 5.0 Circulation and Access:

- 5.1 Adequate access to high hazard wildland/open space areas.  Yes  Partial  No

**Recommendation:** Establish goals and policies for adequate access in Very High Fire Hazard Severity Zones that meet or exceed standards in Title 14 CCR 1270 for lands with no structures, and maintain conditions of access in a suitable fashion for suppression access or public evacuation.

**Priority:**  High  Medium  Low  N/A

- 5.2 Standards for evacuation of residential areas in high hazard areas.  Yes  Partial  No

**Recommendation:** Goals and policies should be established to delineate residential evacuation routes and evacuation plans in high or very high fire hazard residential areas.

**Priority:**  High  Medium  Low  N/A

- 5.3 Incorporate a policy that provides for a fuel maintenance program along roadways in the agency having jurisdiction.  Yes  Partial  No

**Recommendation:** Develop an adaptive vegetation management plan that considers fuels, topography, weather (prevailing winds and wind event specific to the area), fire ignitions and fire history.

**Priority:**  High  Medium  Low  N/A

- 5.4 Adequacy of existing and future transportation system to incorporate fire infrastructure elements.  Yes  Partial  No

**Recommendation:** Establish goals and policies for proposed and existing transportation systems to facilitate fire infrastructure elements such as turnouts, helispots and safety zones.

**Priority:**  High  Medium  Low  N/A

## 6.0 Defensible Space

- 6.1 Develop geographic specific fire risk reduction mitigation measures using fuel modification.  
Yes Partial No

**Recommendation:** Include policies and recommendations that incorporate fire safe buffers and greenbelts as part of the development planning. Ensure that land uses designated near very fire hazard severity zones are compatible with wildland fire protection strategies/capabilities.

**Priority:** High  Medium  Low N/A

- 6.2 Fuel modification around homes. Yes Partial No

**Recommendation:** Establish ordinances in SRA or VHFHSZ for vegetation fire hazard reduction around structures that meet or exceed the Board of Forestry and Fire Protection's Defensible Space Guidelines for SRA and the Very High Fire Hazard severity zones, including vacant lots.

See [http://www.bof.fire.ca.gov/pdfs/Copyof4291finalguidelines9\\_29\\_06.pdf](http://www.bof.fire.ca.gov/pdfs/Copyof4291finalguidelines9_29_06.pdf)

**Priority:** High  Medium  Low N/A

**Recommendation:** Reduce fuel around communities and subdivisions, considering fuels, topography, weather (prevailing winds and wind event specific to the area), fire ignitions and fire history.

**Priority:** High  Medium  Low N/A

- 6.3 Fire suppression defense zones. Yes Partial No

**Recommendation:** Establish goals and policies that create wildfire defense zones for emergency services, including fuel breaks or other staging areas where WUI firefighting tactics could be most effectively deployed.

**Priority:** High  Medium  Low N/A

## 7.0 **Emergency Services:**

- 7.1 Map/describe existing emergency service facilities and areas lacking services, specifically noting any areas in SRA or VHFHSZs. Yes Partial No **Located in safety element as well as the Emergency Operations plan, and unit fire plan under the Battalion 3 information.**

**Recommendation:** Include descriptions of emergency services including available equipment, personnel, and maps of facility locations.

**Priority:** High  Medium  Low N/A

**Recommendation:** Initiate studies and analyses to identify appropriate staffing levels and equipment needs commensurate with the current and projected emergency response environment.

**Priority:** High  Medium  Low N/A

- 7.2 Assessment and projection of future emergency service needs. Yes Partial No

**Recommendation:** Ensure new development includes appropriate facilities, equipment, personnel and capacity to assist and support wildfire suppression emergency service needs. Future emergency service needs should be:

- Established consistent with state or national standards.
- Developed based on criteria for determining suppression resource allocation that includes elements such as identified values and assets at risk, ignition density, vegetation type and condition, as well as local weather and topography.
- Local Agency Formation municipal services reviews for evaluating level of service, response times, equipment condition levels and other relevant emergency service information.

**Priority:**  High  Medium  Low  N/A

7.3 Adequacy of training.  Yes  Partial  No

**Recommendation:** Establish goals and policies for emergency service training that meets or exceeds state or national standards.

**Priority:**  High  Medium  Low  N/A **Located in safety element as well as the Emergency Operations plan, and unit fire plan under the Battalion 3 information within the plan.**

7.4 Inter-fire service coordination preparedness/mutual aid and multi-jurisdictional fire service agreements.  Yes  Partial  No

**Recommendation:** Adopt the Standardized Emergency Management System for responding to large scale disasters requiring a multi-agency response. Ensure and review mutual aid/automatic aid and other cooperative agreements with adjoining emergency service providers.

**Priority:**  High  Medium  Low  N/A

## 8.0 **Post Fire Safety, Recovery and Maintenance:**

The post fire recommendations address an opportunity for the community and landowners to re-evaluate land uses and practices that affect future wildfire hazards and risk. They also provide for immediate post-fire life and safety considerations to mitigate potential losses to life, human assets and critical natural resources.

8.1 Evaluation of redevelopment.  Yes  Partial  No

**Recommendation:** In High and Very hazardous areas, ensure redevelopment utilizes state of the art fire resistant building and development standards to improve past ‘substandard’ fire safe conditions.

**Priority:**  High  Medium  Low  N/A

8.2 Long term maintenance of fire hazard reduction mitigation projects.  Yes  Partial  No

**Recommendation:** Provide polices and goals for maintenance of the post-fire-recovery projects, activities, or infrastructure.

**Priority:**  High  Medium  Low  N/A

8.3 Reevaluate hazardous conditions and provide for future fire safe conditions. Yes Partial No

**Recommendation:** Incorporate goals and policies that provide for reassessment of fire hazards following wildfire events. Adjust fire prevention and suppression needs for both short and long term fire protection.

**Priority:** High Medium Low N/A

**Recommendation:** Develop burn area recovery plans that incorporate strategic fire safe measures developed during the fire suppression, such as access roads, fire lines, safety zones, and fuelbreaks, and helispots.

**Priority:** High Medium Low N/A

8.4 Post fire life and safety assessments. Yes Partial No

**Recommendation:** Develop frameworks for rapid post-fire assessment and project implementation to minimize flooding, protect water quality, limit sediment flows and reduce other risks on all land ownerships impacted by wildland fire.

**Priority:** High Medium Low N/A

**Recommendation:** Identity flood and landslide vulnerability areas related to post wildfire conditions.

**Priority:** High Medium Low N/A

**Recommendation:** Establish goals and policies that address the intersection of flood /landslide/post fire burn areas into long term public safety protection plans. These should include treatment assessment of fire related flood risk to life, methods to control storm runoff in burn areas, revegetation of burn areas, and drainage crossing maintenance.

**Priority:** High Medium Low N/A

**Recommendation:** Encourage rapid post-fire assessment, as appropriate, and project implementation to minimize flooding, protect water quality, limit sediment flows and reduce other risks on all land ownerships impacted by wildland fire.

**Priority:** High Medium Low N/A

8.5 Restore sustainable landscapes and restore functioning ecosystems. Yes Partial No

**Recommendation:** Develop burn area recovery plans, evaluation processes and implementation actions that encourage tree and biomass salvage, reforestation activities, create resilient and sustainable landscapes, and restore functioning ecosystems.

**Priority:** High Medium Low N/A

8.6 Incorporate wildlife habitat/endangered species considerations. Yes Partial No

**Recommendation:** Establish goals and policies for consideration of wildlife habitat/endangered species into long term fire area recovery and protection plans, including environmental protection agreements such as natural community conservation plans.

**Priority:**  High  Medium  Low  N/A

8.7 Native species reintroduction.  Yes  Partial  No

**Recommendation:** Incorporate native species habitat needs as part of long term fire protection and fire restoration plans.

**Priority:**  High  Medium  Low  N/A

**9.0 Terrorist and homeland security impacts on wildfire protection:**

These recommendations are included to address fire protection needs related to terrorist acts or other homeland security preparedness and response actions. Both preparedness and incident response can adversely impact fire protection. Adverse effects include substantially decreasing emergency resources' availability, responsiveness and effectiveness by diverting resources, interrupting communications, or restricting emergency access. **Fire Department stated city would form a committee to look into how best to address this section**

9.1 Emergency response barriers.  Yes  Partial  No

**Recommendation:** Identify goals and policies that address vital access routes that if removed would prevent fire fighter access (bridges, dams, etc.). Develop an alternative emergency access plan for these areas.

**Priority:**  High  Medium  Low  N/A

9.2 Prioritizing asset protection from fire when faced with a lack of suppression forces.  
 Yes  Partial  No

**Recommendation:** Identify and prioritize protection needs for assets at risk in the absence of response forces.

**Priority:**  High  Medium  Low  N/A

**Recommendation:** Establish fire defense strategies (such as fire ignition resistant areas) that provide adequate fire protection without dependency on fire resources (both air and ground) and could serve as safety zones for the public or emergency support personnel.

**Priority:**  High  Medium  Low  N/A

9.3 Communication channels during incidents.  Yes  Partial  No

**Recommendation:** Establish goals and policies consistent with the Governor's Blue Ribbon Fire Commission of 2005 for communications and interoperability. Example goals and policies should address fire personnel capability to communicate effectively across multiple frequency bands and update and expansion of current handheld and mobile radios used on major mutual aid incidents.

**Priority:**  High  Medium  Low  N/A **Located in the emergency operations plan and unit plan**



# 7

## Public Safety

### 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 man-made 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) to recognize the unique risks associated with Yucaipa's natural environment (geology, landforms, waterways, and weather), and 2) to 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
- + Severe Weather
- + Emergency Preparedness
- + 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 man-made 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.
- + **Man-Made Hazards.** Manmade hazards 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, in accordance with adopted local plans, to prepare for emergencies 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.

- + **Hazard Mitigation Plan.** Yucaipa’s Hazard Mitigation Plan identifies hazards and establishes a plan to prepare for emergencies and disasters and mitigate potential impacts. In accordance with Government Code §8685.9 and 65302.6, the City is adopting the HMP concurrent with the General Plan.
- + **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.
- + **Master Plan of Drainage.** 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 Unit Plan.** The Yucaipa Fire Department, through a contract with the California Department of Forestry and Fire Protection, prepares a fire services plan to provide fire protection and emergency medical services to the community.

The next sections provide context for each topic, followed by goals and policies to achieve the General Plan vision. Programs to implement them are included in the Implementation Plan.



## 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. As shown in **Figure S-1a, Geology and Soils**, 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, slope failure has occurred in Crafton Hills above the Chapman Heights development and in northern Yucaipa. Both of these areas are covered by active trace faults.
- + **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. Soil corrosivity 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 Bernardino segment of the San Andreas Fault 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. This magnitude is capable of threatening property and lives.

During the past several decades, Yucaipa has felt the impact of many earthquakes, both local and regional.

- + 1987 Whittier earthquake (M5.9)
- + 1992 Landers earthquake (M7.3)
- + 1992 Big Bear earthquake (M6.4)
- + 1994 Northridge earthquake (M6.6)
- + 2005 Yucaipa earthquake (M4.9)
- + 2008 Chino Hills earthquake (M5.5)

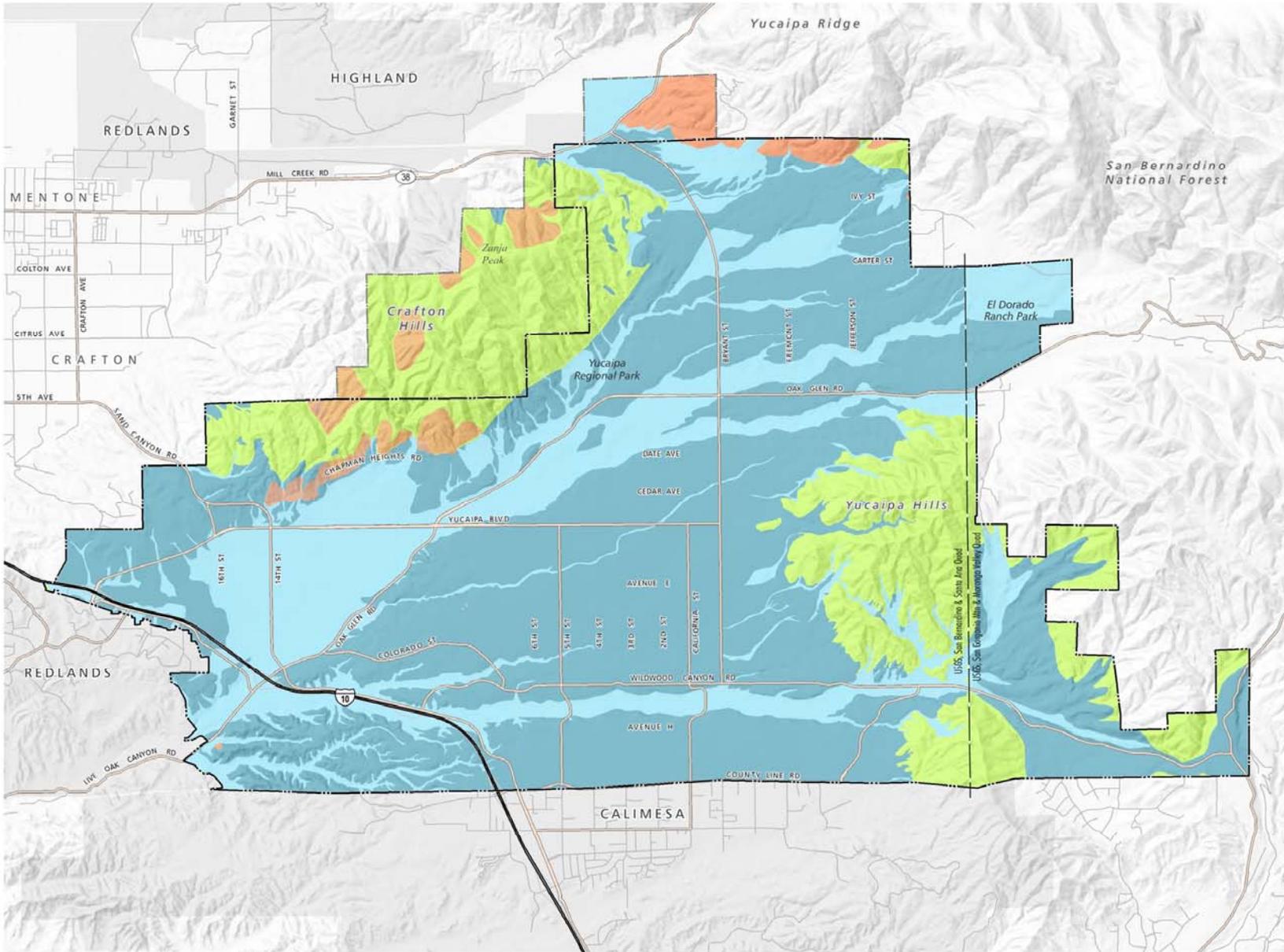
In addition to regional faults, Yucaipa has surface traces of active faults capable of producing damaging earthquakes. The Chicken Hill Fault runs through west Yucaipa and parallels Oak Glen Road south of Yucaipa Boulevard. The Crafton Hills Fault runs along the southeast front of the Crafton Hills of Yucaipa. Northern Yucaipa is also transected by a series of fault lines. These faults are designated Alquist-Priolo Zones (AP zones) in accordance with state law.

Seismic hazards depend on the fault, soil types, and water table. **Figure S-1b, Geology and Soils**, illustrates these specific hazards.

- + **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.



Figure S-1a  
GEOLOGY AND SOILS



- City Limits
- Yucaipa Sphere of Influence
- Bedrock
- Landslide
- Younger Alluvium (Holocene)
- Older Alluvium (Pleistocene)

Source: USGS - San Bernardino and Santa Ana, Morton and Miller 2004; San Geronimo Mtn. and Morongo Valley, Dibblee 2008; Cogstone 2014; Placeworks 2014



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## 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 State of California, under the guidelines of the Alquist-Priolo and Seismic Hazard Mapping Acts, has identified earthquake hazards. **Figure S-1b, Geologic Hazards Overlay District**, shows the location of potential geologic and seismic hazards. These include active faults and Alquist-Priolo zones, prior landslides, subsidence and liquefaction hazards, and related seismic or geologic concerns that may present a threat to structures, property, and people.

### 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 Code regulations and Geologic and Seismic Hazards Overlay District; update codes and ordinances periodically for latest advances.
- S-1.5 **City Critical Facilities and Structures.** Locate, design, maintain, and upgrade critical facilities (police, medical facilities, fire, roads, reservoirs, etc.) to minimize susceptibility to seismic and geologic hazards.
- S-1.6 **Other Agency Critical Facilities and Services.** Encourage Caltrans, school district, CAL FIRE, water districts, California Department of Water Resources, and utilities providing critical infrastructure to ensure facilities are capable of withstanding earthquakes.
- 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.



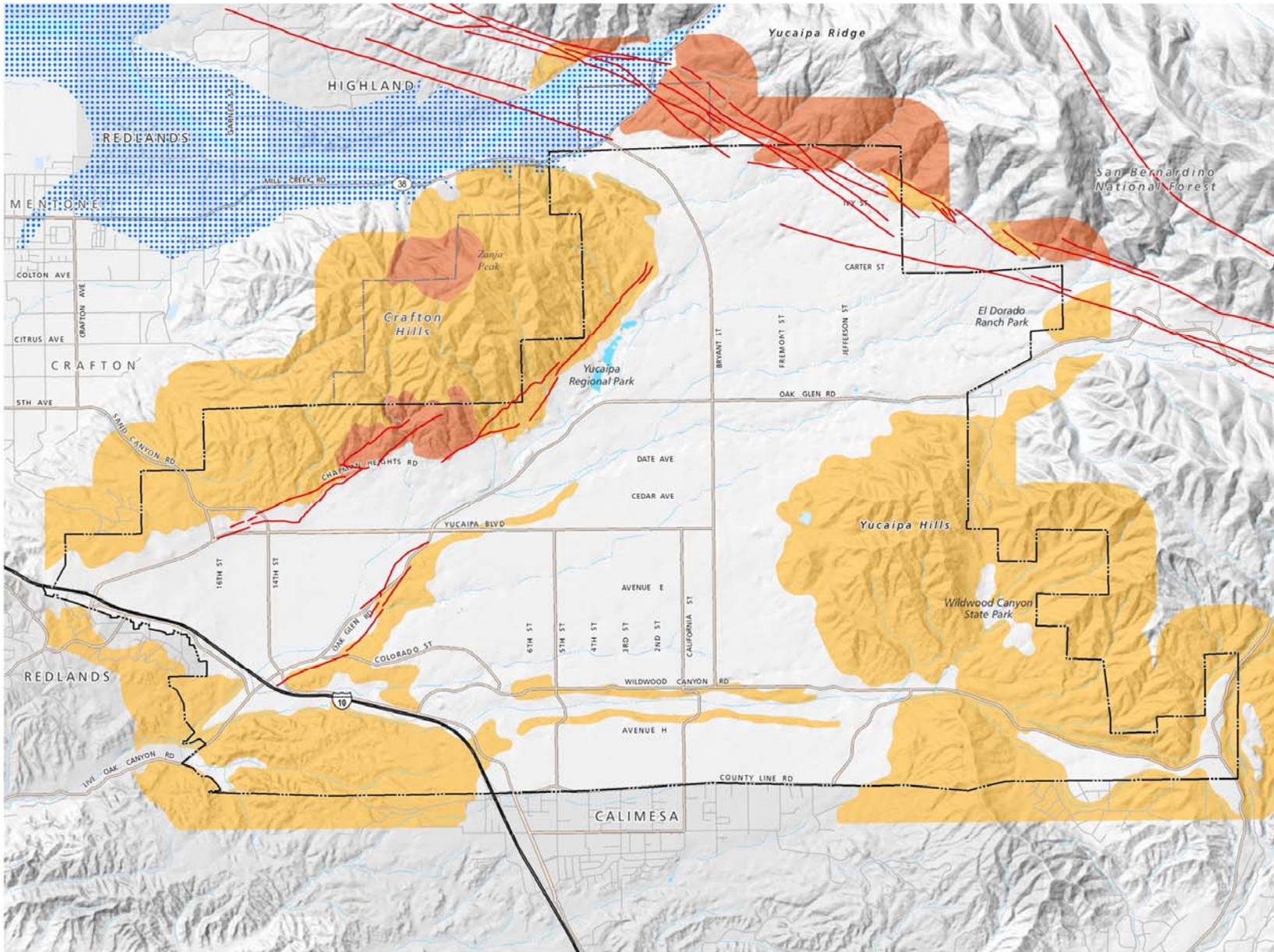


Figure S-1b  
**GEOLOGIC HAZARD  
OVERLAY DISTRICT**

- City Limits
- Yucaipa Sphere of Influence
- Alquist Priolo Fault Line
- Fault Zone
- Landslide Susceptibility**
- Least or Marginally Susceptible
- Generally Susceptible
- Most Susceptible
- Liquefaction Susceptibility**
- Most Susceptible

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. Oak Glen and Wildwood creeks converge to form Yucaipa Creek on the southwestern side of the City. 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 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 local and regional channels, detention basins, and other flood control facilities. More than 28 miles of drainage infrastructure, a dozen detention basins, and numerous catch basins help to divert floodwaters. Additional facilities and infrastructure are planned.



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





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

**Yucaipa continues to prioritize flood control projects to reduce potential flooding hazards. The \$6.1 million Oak Glen Creek 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.**

## Flood Hazards

Yucaipa's terrain is vulnerable to flooding during winter months or intense seasonal storms. These hazards are riverine flooding, dam inundation, and shallow flooding due to clogged, undersized, or missing drainage facilities. Flooding hazards are described below.

### Riverine Floods

Riverine flooding is the most prevalent flood hazard. Yucaipa has many fluctuating waterways—Yucaipa Creek, Oak Glen Creek, Wildwood Creek, Chicken Springs Wash, and Spoor Creek. Although creeks are generally dry, the Yucaipa area and Dunlap Acres can experience flooding during storm events. The Federal Emergency Management Agency (FEMA) is responsible for preparing flood maps to plan for potential flooding emergencies. FEMA maps delineate Special Flood Hazard Areas having a 1 and 2 percent chance of experiencing a flood in any year. Yucaipa incorporates these areas into its Floodplain Safety Overlay District for use in regulating development and planning capital projects.

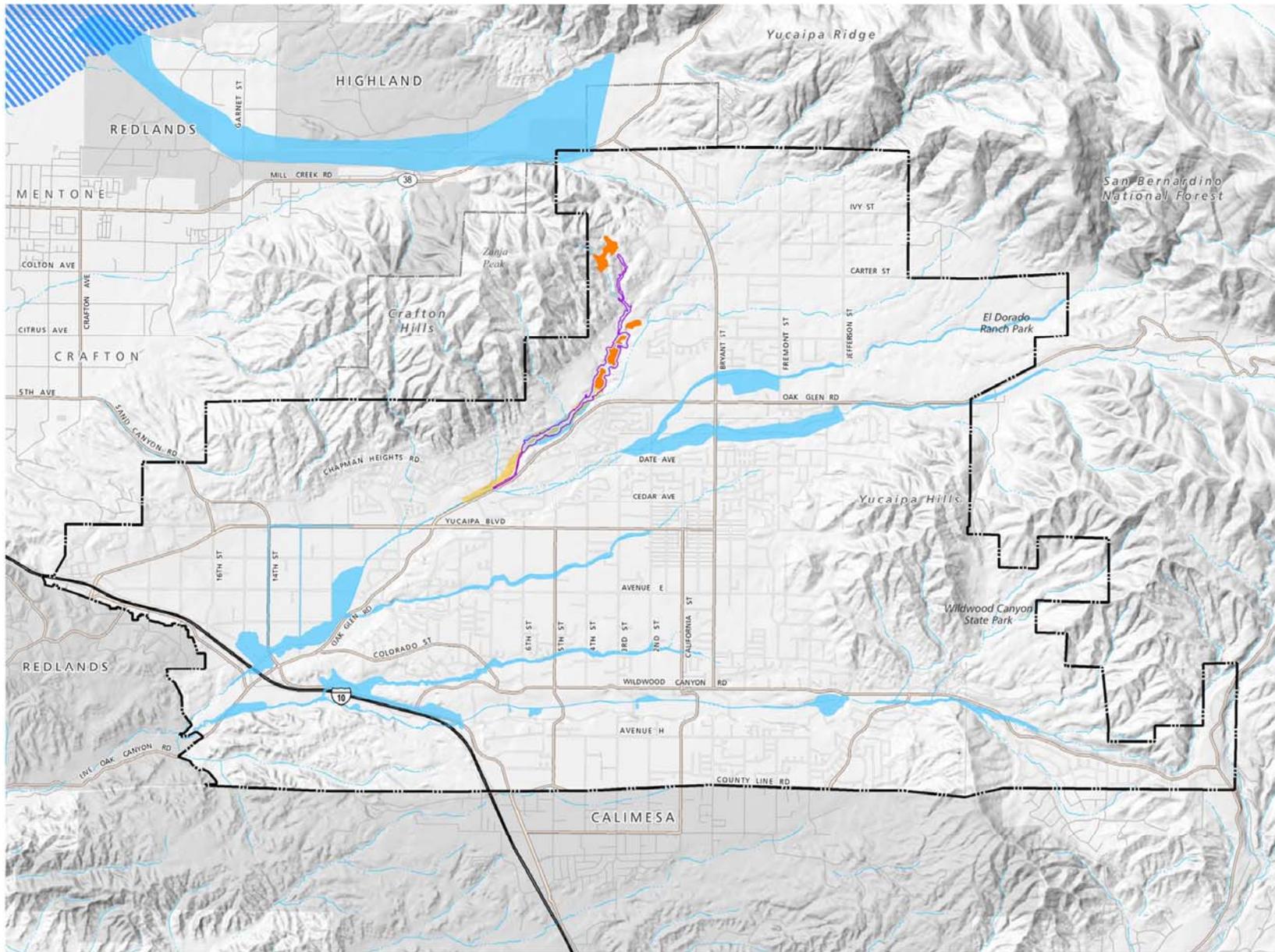
### Dam Inundation

Dam inundation refers to flooding when water retention structures and dams fail during an earthquake or other emergency. Yucaipa has one reservoir in Crafton Hills and three at the Regional Park. In the event of an earthquake or other catastrophic event, these reservoirs present a remote risk of failure. In that event, the inundation path would extend along Oak Glen Road, potentially affecting about 50 homes in Chapman Heights. To mitigate this hazard, dams meet safety requirements and annual inspections by the California Department of Water Resources. Yucaipa also has several dozen aboveground reservoirs that could cause more localized inundation, although to a significantly lesser degree.

### Urban Flooding

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. In particular, Dunlap Acres and areas below the confluence at Yucaipa Creek and Wildwood Creek are subject to flooding. Other areas where roads decline below grade (low water crossings) flood during heavy rainfall. Recent completion of flood control projects (detention basins, storm drains, etc.) has greatly alleviated hazards. Additional projects are planned, including low water crossings.

**Figure S-3, Floodplain Safety Overlay District**, shows Yucaipa's safety hazards due to riverine flooding and dam inundation.



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

- City Limits
- Yucaipa Sphere of Influence
- Reservoir
- Yucaipa Res. Dam Inundation (1976)
- Crafton Hills Dam Inundation (2010)
- Stream/River
- Seven Oaks Dam Inundation
- FEMA Flood Zone
- 100 Year Flood Area

Source: FEMA 2014

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## 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

As required by federal law, FEMA identifies all 100-year and 500-year floodplains for communities across the nation. Yucaipa's Municipal Code has a Floodplain Safety Overlay District that includes these flood zone boundaries. Also included are areas where the City Engineer has deemed the potential exists for flooding due to dam inundation and localized flooding. The Floodplain Safety Overlay District Map identifies areas within Yucaipa needing additional protection from flooding hazards.

### Building Codes and Development Standards

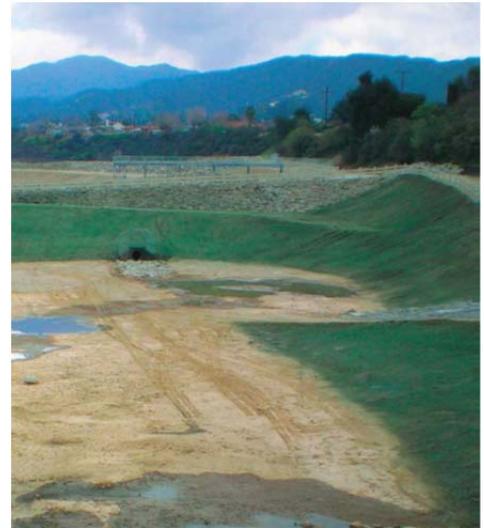
Proposed development projects within the Floodplain Safety Overlay District must be designed to meet applicable California building codes and required amendments. Additional mitigation measures for flood hazards may be required, including structure anchoring, construction materials and methods, utility 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

Yucaipa's Master Plan of Drainage (MPD), last revised in 2011, outlines various planned improvements to flood control channels. Improvements include detention basins; desilting basins; flood channel stabilization; and improvements to drainage facilities and infrastructure needed to provide protection from flooding events. MPD improvements are consistent with those identified in the Hazard Mitigation Plan and Yucaipa's annual Capital Improvement Program. In addition, flood control improvements are also implemented by the San Bernardino County Flood Control District

### 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.



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



## 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 **Prohibited Land Uses.** Prohibit both essential and critical facilities and facilities that use, store, transport, or dispose hazardous materials from developing within the 100-year or 500-year floodplain.
- S-2.4 **Building Codes.** Require adherence to the latest codes in the California Building Code, FEMA guidelines, and Floodplain Safety Overlay District to minimize flood hazards; update codes periodically for latest advances.
- 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.** Collaborate with the San Bernardino County Flood Control District to maintain and improve the City's flood control channels and detention basins.
- 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

Wildfires are a necessary part of the natural ecosystem, but they become a hazard when they extend into developed areas. Southern California's dry weather conditions combined with topography, high winds, and vegetation in open space areas and forestlands can result in fast-spreading wildland fires. Left uncontrolled, wildfires have the potential to damage or destroy structures, roadways, and utility systems as well as disrupt the local economy.

### Fire Hazards

Yucaipa's topography, vast open space, abundant vegetation, and dry weather make the community especially vulnerable to fire. Open space areas surrounding Yucaipa, including the Crafton Hills, El Dorado Ranch Park, Wildwood Canyon State Park, and the national forest are at the urban-wildland interface, and their vegetation may provide fuel for wildfire. In addition, the strong, dry Santa Ana winds that seasonally blow across Yucaipa can cause wildfires to spread quickly.

According to the California Department of Forestry and Fire Protection (CAL FIRE), nearly all areas along Yucaipa's borders are designated moderate, high, or very high fire hazard severity zones within local responsibility areas. LRAs represent land in which Yucaipa has the financial responsibility for preventing and suppressing fires. The primary areas in the City not designated as a moderate, high, or very high fire zone are built portions of Central Yucaipa Core, Dunlap Acres, and a small portion of North Bench.

Since 2000, Yucaipa has experienced many wildland fires due to a natural causes, human error, and arson. Notable fires include:

- + 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

Although wildfires are larger and more visible, urban fires occur more frequently in Yucaipa. The proximity of urban fires to structures can quickly threaten businesses, property, and lives. During a typical year, Yucaipa records about 350 fires, including 100 vegetation fires, 100 structure fires, 75 vehicle fires, and 75 other miscellaneous fires. Planning for urban fires, in addition to wildland fire, is thus an essential fire protection strategy.



*Yucaipa's natural topography and grasslands are a continual fire hazard.*



## Fire Service Delivery

CAL FIRE (also referred to as Yucaipa Fire) provides ongoing fire service protection within Yucaipa. This includes all areas within the Local Responsibility Area (generally the City's incorporated boundaries) and certain State Responsibility Areas. The City of Yucaipa supports CAL FIRE's Strategic Fire Plan and is committed to working with associated emergency service providers to minimize the risk of wildfires, urban fires, property damage, and injury.

### Fire Stations

Yucaipa Fire provides fire and paramedic services from three permanent fire stations in Yucaipa. CAL FIRE also has access to one reserve station in Oak Glen (volunteer staffed). As the City builds out, another permanent station (five total) may be required to maintain current levels of services. Current fire stations are:

- + Bryant Street Fire Station #1
- + Crafton Hills Fire Station #2
- + Wildwood Canyon Fire Station #3
- + Oak Glen Reserve Fire Station #4

Yucaipa Fire possesses an effective complement of equipment. Yucaipa battalion staffs up to two Type III fire engines at fire station #1 and Type I Paramedic Engine. Stations #2 and #3 each staff one Type I Paramedic Fire Engine. One Type III 4x4 Fire Engine, one Water Tender, and one 4x4 Brush Patrol are stationed at the Oak Glen Reserve Fire Station, staffed with reserve firefighters when available.

### Service Levels

Yucaipa Fire strives to meet applicable National Fire Protection Association (NFPA) standards for services. NFPA recommends that first responders arrive at the fire scene in six minutes or less at least 90 percent of the time. Response time is measured from the 911 call to arrival at the scene. Yucaipa Fire currently meets the NFPA's recommendation of a six-minute response time; local response times average about five minutes. Upon arrival, all staff is trained in advanced life support to provide emergency medical services.

The Insurance Services Office (ISO) is responsible for evaluating the fire protection needs, service, and readiness of communities nationwide. ISO rates each community's fire suppression system on a 10-point scale, with one (1) being the highest rank that can be achieved. ISO rankings are based on a community's emergency communications, fire department equipment and operations, and water supply. Due to recent improvements in service infrastructure, Yucaipa maintains a Class 3 ISO rating for fire protection services.



## Water Supply

Adequate and reliable water supplies are essential to suppress fires. Yucaipa's water system is set up to provide adequate fire flows for most parts of the community, with the exception of remote areas of the North Bench, Wildwood Canyon, and Crafton Hills. Certain mobile home parks may also have water supply limitations. For areas lacking sufficient water service, CAL FIRE uses water tenders to deliver water needed to suppress fires in those areas.

During the 2008 to 2010 fire seasons, numerous wildland fires threatened the Crafton Hills, Oak Glen, Yucaipa Ridge, and Yucaipa Hills areas in and surrounding the community. In cases where extended attack fire occurs, CAL FIRE maintains emergency land use agreements with the county and Yucaipa Valley Water District. These agreements allow CAL FIRE to use water from Yucaipa Reservoir, Crafton Hills Reservoir, and Yucaipa Regional Park.

To address the governor's emergency drought declaration and mandatory water use reductions, the City is pursuing creative ways to augment water supply for fire suppression. CAL FIRE is formalizing an agreement with the Yucaipa Valley Water District to use its extensive surplus of recycled water. As recycled water infrastructure is extended, CAL FIRE will have increasing flexibility to draw recycled water from locations throughout the community.

## 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. The California Highway Patrol is in charge of spills that occur in or along freeways, with other agencies (including Caltrans, San Bernardino County Fire Department, and local sheriffs) providing additional resources as needed.

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 under the Unified Program. 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 & Onsite Waste Treatment Program
- + Underground Storage Tank Program



## Protecting Our Community

CAL FIRE protects Yucaipa with ample staff, facilities, and equipment. Yucaipa is also protected from fire through hazard identification, enforcement of building codes and development standards, a fire master plan, and mutual aid agreements.

### Hazard Identification

**Figure S-3, Fire Hazard Overlay District**, shows Yucaipa's fire hazards as designated by CAL-FIRE. Fire Safety Review Area 1 (FR-1) includes wildland areas that are not likely to be developed and areas of urban-wildland interface. FR-1 areas are characterized by abrupt slope changes and prevalent natural hazards. Fire Safety Review Area 2 (FR-2) includes lands that are partially or completely developed, or suitable for development, but are vulnerable to fire due to proximity to FR-1 areas.

### Building Codes and Development Standards

The Yucaipa Municipal Code requires adherence to specific codes to mitigate fire hazards. California Building and Fire Code requirements include construction requirements (e.g., building separation, roofing materials, fire hydrant locations), design features (e.g., emergency access routes, water mains and storages, fuel modification), and erosion and sediment control. Areas within FR-1 adhere to more strict development standards. Fuel modification plans may also be required within fire overlay districts.

### Strategic Fire Plan

CAL FIRE implements a strategic fire services plan for Yucaipa. The goal is to reduce total costs and losses from fire by protecting assets at risk through focused, prefire management prescriptions that increase initial attack success and through engaged collaboration with local stakeholders and public agencies. The City supports the Strategic Fire Plan and is committed to working with emergency service providers to minimize the risk of wildfires in the area and protect the injured through emergency services.

### Mutual Aid Agreements

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



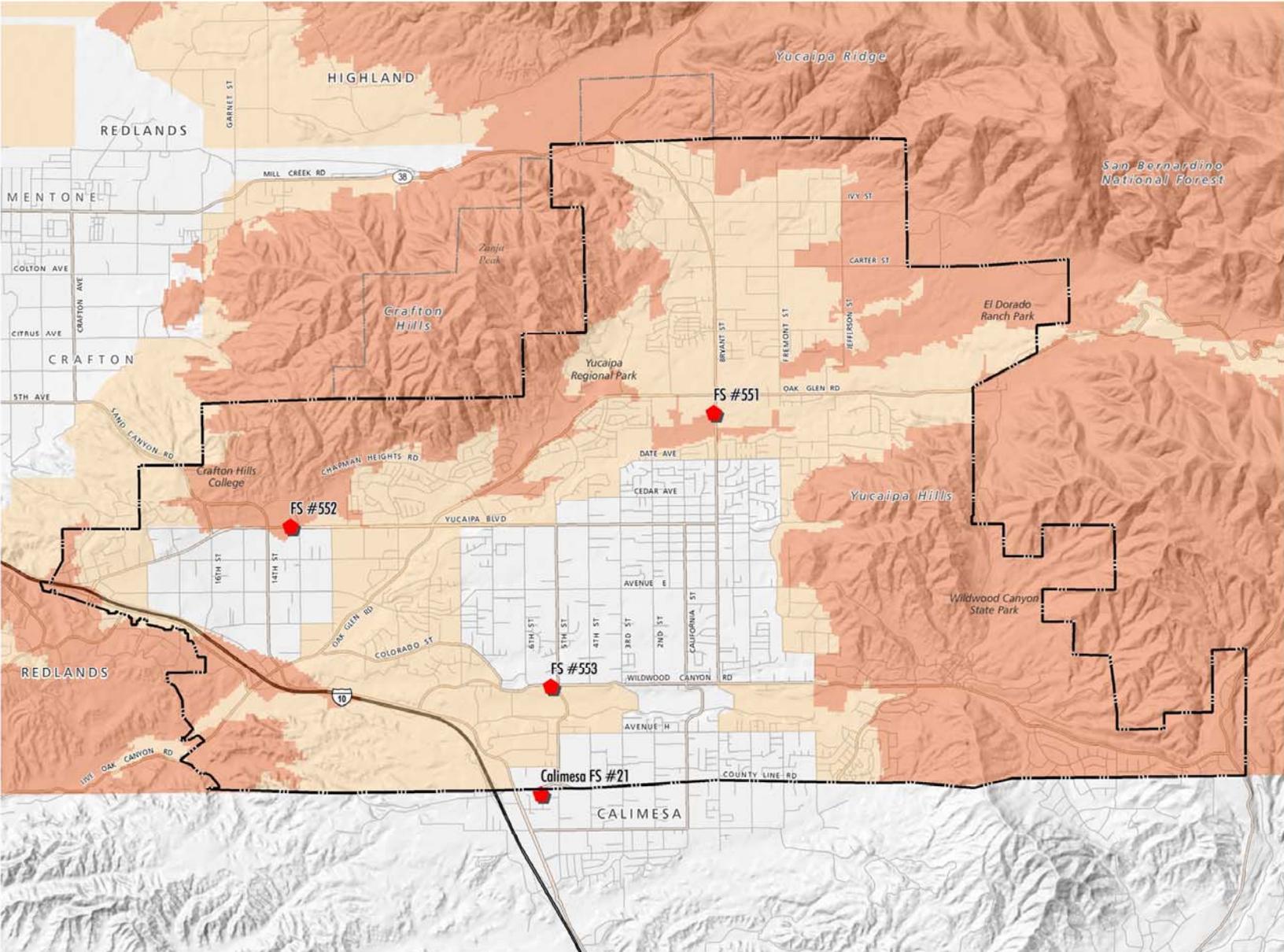


Figure S-3  
FIRE HAZARD  
OVERLAY DISTRICT

- City Limits
- Yucaipa Sphere of Influence
- Fire Stations
- FR1 Overlay Area
- FR2 Overlay Area

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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## 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 **Service Levels.** Provide appropriate staffing levels, equipment, and facilities to maintain a community ISO 3 rating; strive to meet NFPA-recommended response times for fires and emergency paramedic response.
- S-3.3 **Fire and Building Codes.** Require adherence to fire standards and building codes in accordance with the City's municipal code, Fire Hazard Overlay Districts, California Fire Code, and California Building Code.
- S-3.4 **Fuel Modification.** Enforce fuel modification standards and defensible space requirements around structures to reduce wildfire hazards and to protect Yucaipa's urban area from potential wildfire spreading.
- S-3.5 **Fire Abatement Features.** Encourage residential, commercial, and industrial developments to implement fire-hazard-reducing project designs and features (e.g., fire resistive materials, vegetation).
- S-3.6 **Development Review.** Allow CAL FIRE to review future development proposals for impacts to fire facilities and compatibility with high fire hazard severity zones.
- S-3.7 **Adequate Water Supply.** Ensure that public and private water distribution and supply facilities have adequate capacity and reliability to supply emergency firefighting needs beyond everyday demands.
- S-3.8 **Aid Agreements.** Participate in mutual aid and automatic aid agreements with adjoining fire service providers, emergency medical service providers, and other agencies providing critical services.
- S-3.9 **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.





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

## EMERGENCY PREPAREDNESS

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

### Local Hazard Mitigation Plan

California jurisdictions are required to adopt a hazard mitigation plan (HMP) as part of their safety element. Yucaipa’s HMP includes resources and information to assist residents, public and private sector organizations, and others interested in planning for hazards. The HMP identifies hazards, assesses potential losses, and investigates Yucaipa’s vulnerability. The plan also identifies ways to prepare, minimize loss, and educate the public about hazards. The updated HMP and Yucaipa General Plan are adopted concurrently.

Although the HMP covers a wide range of topics, the primary focus of the HMP is directed to hazards that have the greatest probability of occurrence and associated losses in Yucaipa. These include:

- + Earthquake and related events
- + Flooding and dam inundation
- + Fire safety
- + Extreme weather (high wind, heat, etc.)

### Local Emergency Operations Plan

Yucaipa also prepares and executes an Emergency Operations Plan (EOP) to prepare for and respond to emergencies associated with natural disasters or human-caused emergencies that require a coordinated response. The EOP is consistent with the requirements of the Standardized Emergency Management System (Government Code § 8607[a]) and the National Incident Management System for managing multiagency/multi-jurisdictional emergencies.

The EOP addresses the following issues:

- + Adequate personnel, equipment, and expertise from response agencies/organizations.
- + Well-coordinated response activities with interoperable communications.
- + Continuous training and exercises.
- + Awareness of local resources available through City departments and by prearranged agreements.
- + Reviewing and testing of the plan on a regular basis.

## Protecting Our Community

The Yucaipa Fire Department and the City of Yucaipa General Services/City Clerk Department are responsible for coordinating disaster preparedness planning and appropriate response efforts with other City departments and local and state agencies. The City addresses disaster preparedness, response, and recovery.

### Early Notification

The City of Yucaipa plays an active role in notifying residents of potential emergencies. Prior to an emergency, the City notifies residents on its Facebook page, City website link to the National Weather Service, and mobile kiosks throughout the community. City web links reference other notification centers, including the San Bernardino County and Southern California Earthquake Center. Additional notifications of potential hazards and emergency conditions can be provided through an opt-in notification process.

### Essential Facilities and Lifeline Services

Essential facilities and lifeline services are critical for responsive disaster planning and recovery. Essential facilities include police and fire stations, emergency operations centers, generators, communications centers, water supply and transmission infrastructure, and other facilities needed during and after an emergency. Lifeline services critical to a city's health and safety include water, sewer, energy, communications, and transportation routes. Individual agencies are responsible for maintaining them in good working order.

### Public Education

The City participates in educational opportunities and community events that reinforce the responsibility of residents, businesses, and City staff to make adequate plans for disasters. Yucaipa provides citizens access to emergency planning, hazard mitigation, and emergency resources via the City's disaster preparedness website. In addition, the City provides preparedness outreach through an "Emergency Preparedness Expo" and other events each year.

### Intergovernment Coordination

Yucaipa's emergency preparedness program is aligned with federal and state efforts. The federal government implements the National Response Framework to access federal resources and coordination when needed. The state operations center and regional emergency operations centers may also be activated to coordinate emergency resources. San Bernardino County, the operational area unit, is responsible for coordinating emergency activities and resources locally and with state/federal entities. These relationships are articulated further in the City's emergency operations plan.



## 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 **Land Use Patterns and Facilities.** Maintain land use patterns and building standards that minimize exposure to natural or human-caused hazards and contribute to a “disaster-resistant” community.
- S-4.2 **Hazard Planning.** Update City 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-4.3 **Training.** Facilitate training of City emergency response personnel through coursework, emergency operations plan orientation, disaster service training, emergency operations center training, and other training.
- S-4.4 **Public Education.** Promote education and events that reinforce the responsibility of all residents, business owners, and City staff to individually and collectively plan for, respond to, and recover from disasters.
- S-4.5 **Interagency Support.** Sustain mutual aid agreements through the California Disaster and Civil Defense Master Mutual Aid Agreement, to provide emergency aid to parties as needed.
- S-4.6 **Communications.** Maintain effective communication protocols and systems for coordinating service providers, neighboring cities, business, schools, and other agencies for responding to emergencies.
- S-4.7 **Critical Facilities and Lifeline Services.** Work with various 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-4.8 **Emergency Access and Evacuation.** Maintain emergency access, protocols, and evacuation routes for residents, business, and equine and large animals; regularly exercise evacuation protocol and procedures.
- S-4.9 **Recovery.** Foster provision of recovery programs that provide relief to individuals and communities during times of emergency, so that necessary actions are taken to return public services to a state of normalcy.



## 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.



## NOISE AND VIBRATION

Noise is generally 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 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.



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



### Land Use Planning and Compatibility

Yucaipa is responsible for protecting residents and visitors from unacceptable noise and vibration. Table S-1 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 nontransportation 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-1: 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.

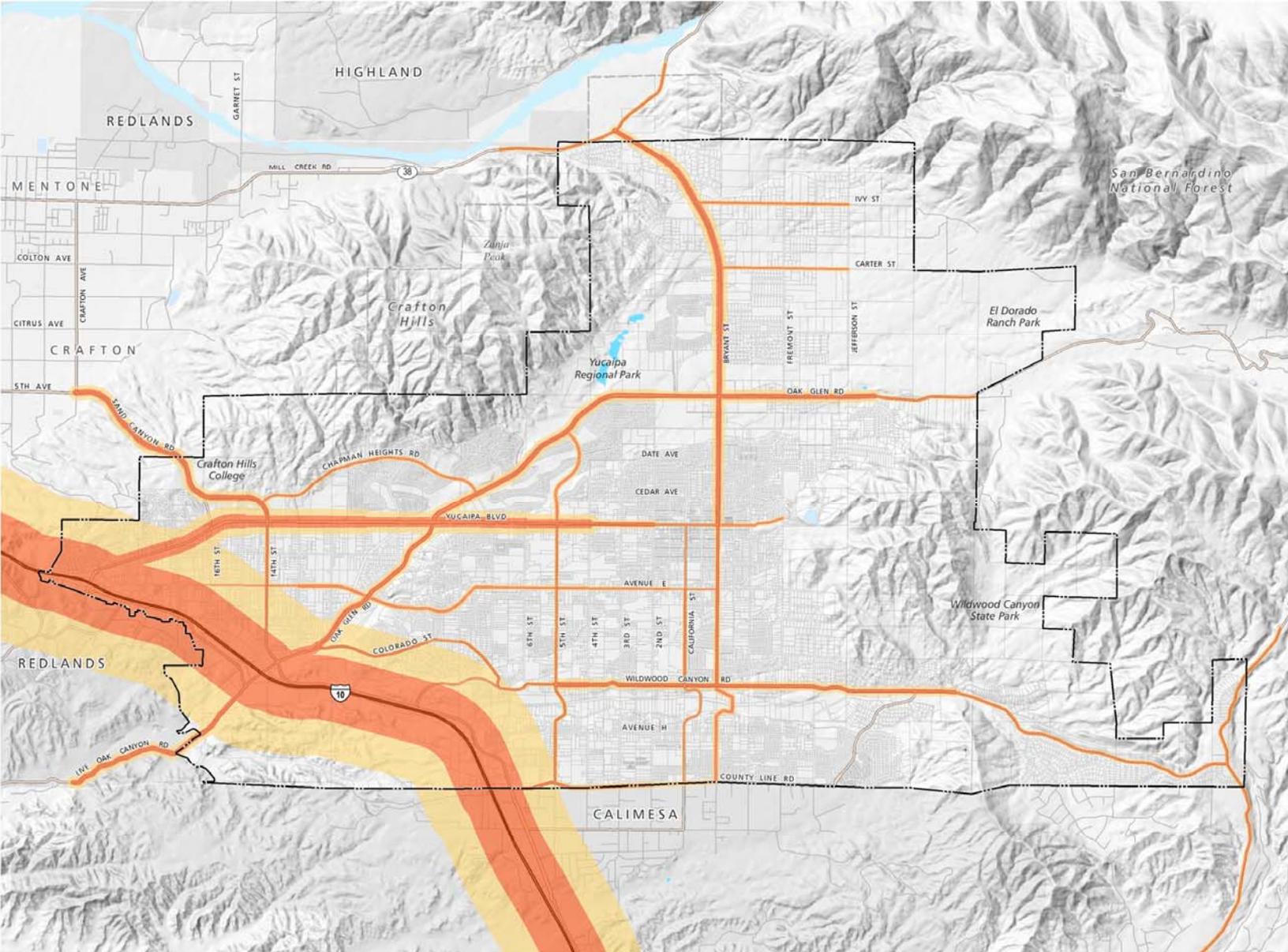
### Future Noise Levels

The predominant source of noise in Yucaipa 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-4, Noise Hazard Overlay District**, shows the greatest source of noise are the following 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



Figure S-4  
NOISE HAZARD  
OVERLAY DISTRICT



Source: City of Yucaipa, 2014

9/17/2015



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## 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

The City of Yucaipa enforces the State of California's Noise Insulation Standards (California Administrative Code, Title 24) and Chapter 35 of the Uniform Building Code. These noise 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.



## 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 unhealthful 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 unhealthful 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 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.

The City of Yucaipa has prepared a CAP to serve as the City's roadmap for reducing GHG emissions in City operations and the community at large. The CAP presents the greenhouse gas inventories, identifies the effectiveness of California initiatives to reduce GHG emissions, and identifies local measures that were selected by the City to reduce GHG emissions under the City's jurisdictional control to achieve the City's identified GHG 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 specific City strategies to achieve GHG reduction targets for Yucaipa. The General Plan Environmental Impact Report also contains a list of 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.

