Hazard Mitigation Plan

City of Yucaipa, CA

Adoption Date: February 28, 2005
Updated on March 4, 2005

Primary Point of Contact

Jennifer Shankland
Director of General Services/City Clerk
City of Yucaipa
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RESOLUTION NO. 2005-11

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF YUCAIPA, CALIFORNIA, ADOPTING THE LOCAL HAZARD MITIGATION PLAN AS REQUIRED BY THE DISASTER MITIGATION ACT OF 2000.

WHEREAS, the Disaster Mitigation Act of 2000 requiring local governments to develop and submit hazard mitigation plans by November 1, 2004; and

WHEREAS, to be eligible for Hazard Mitigation grant funding the City must adopt and maintain a Local Hazard Mitigation Plan; and

WHEREAS, the Local Hazard Mitigation Plan is considered the representation of the City's commitment to reduce risks from natural disasters, and serves as a guide for decision makers as they commit resources to reducing the effects of natural disasters; and

WHEREAS, the City is charged and entrusted with the protection of persons and property prior to, during emergencies, and/or disaster conditions; and

WHEREAS, the City has undertaken a comprehensive planning effort in developing the Local Hazard Mitigation Plan by: organizing resources, assessing risks, developing and implementing a mitigation plan and monitoring progress.

NOW, THEREFORE, BE IT RESOLVED, DETERMINED AND ORDERED BY THE CITY COUNCIL OF THE CITY OF YUCAIPA AS FOLLOWS:

SECTION 1. The City Council approves the Local Hazard Mitigation Plan of the City of Yucaipa.

SECTION 2. The City Council authorizes the Director of Emergency Services to make necessary administrative and operational changes to the plan that are in keeping with the intent of the plan as approved.

SECTION 3. The City Council authorizes the Director of Emergency Services, or his duly appointed representative, to perform all duties required to carry out the Local Hazard Mitigation Plan.

SECTION 4. That the City Clerk shall certify to the passage and adoption of this resolution and enter it into the book of original resolutions.

PASSED, APPROVED AND ADOPTED this 28th day of February 2005.

Dick Riddell, Mayor

ATTEST

Jennifer Shankland, City Clerk

STATE OF CALIFORNIA }
COUNTY OF SAN BERNARDINO } ss
CITY OF YUCAIPA }

I, LORRIE HUTCHISON, Office Administrator/City Clerk's Department of the City of Yucaipa, do hereby certify that the aforementioned is a true and correct copy of Resolution No. 2005-11, as:

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF YUCAIPA, CALIFORNIA, ADOPTING THE LOCAL HAZARD MITIGATION PLAN AS REQUIRED BY THE DISASTER MITIGATION ACT OF 2000.

and which is on file in the Office of the City Clerk, City of Yucaipa, California.

Said Resolution was adopted by the said City Council at a regular meeting thereof held on the 28th day of February 2005, by the following vote:

AYES:	Council Members Hoyt, Lampi and Masner Mayor Riddell
NOES:	None
ABSTAIN:	None
ABSENT:	Mayor Pro Tem Drusys

LORRIE HUTCHISON
OFFICE ADMINISTRATOR

This 1st day of March 2005.

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APPENDICES:

Section 1 - Introduction

1.1 General Description

Emergencies and disasters cause death or leave people injured or displaced, cause significant damage to our communities, businesses, public infrastructure and our environment, and cost tremendous amounts in terms of response and recovery dollars and economic loss.

Hazard mitigation reduces or eliminates losses of life and property. After disasters, repairs and reconstruction are often completed in such a way as to simply restore to pre-disaster conditions. Such efforts expedite a return to normalcy; however, the replication of pre-disaster conditions results in a cycle of damage, reconstruction, and repeated damage. Hazard mitigation ensures that such cycles are broken and that post-disaster repairs and reconstruction result in a reduction in hazard vulnerability.

While we cannot prevent disasters from happening, their effects can be reduced or eliminated through a well-organized public education and awareness effort, preparedness and mitigation. For those hazards that cannot be fully mitigated, the community must be prepared to provide efficient and effective response and recovery.

1.2 Purpose and Authority

The Disaster Mitigation Act of 2000 (DMA 2000), Section 322 (a-d) requires that local governments, as a condition of receiving federal disaster mitigation funds, have a mitigation plan that describes the process for identifying hazards, risks and vulnerabilities, identify and prioritize mitigation actions, encourage the development of local mitigation and provide technical support for those efforts. This mitigation plan serves to meet those requirements.

1.3 Community Information

The section is to provide a broad perspective, brief history and to describe the makeup and development of the community.

1.Topography:

Yucaipa is located in the eastern portion of the San Bernardino Valley area, at the foot of the San Bernardino Mountains, between the Cities of Redlands and Calimesa. The City is bounded on the northwest by the Crafton Hills, on the south by the City of Calimesa and on the north and east by mountainous terrain.

The topography of the City begins at an approximate elevation of 2,000 feet at the west end, adjacent to the point at which the Interstate 10 freeway enters Yucaipa from the west. Elevations increase in the northeast and eastern portions of the City to approximately 4,000+ feet, which represents an elevation change of 2,000 feet. Within the potential Sphere of Influence, elevations may range as high as 5,000 feet. The heart of the City's elevation is between 2,000 and 3,000 feet.

Much of the area on the northwest portion of the City above 2,400 feet has been designated by the City as an open space preserve.

The City exists in a valley. The Yucaipa Valley is located within the Upper Santa Ana River Valley in the extreme eastern portion of the San Bernardino Valley. "Yukaipat," the Indian name from which Yucaipa was derived, means a village around a marshy area.

This area was formed from Wilson Creek, which bisects the City along a northeast to southwesterly direction. Another major creek bisects the City from east to west in the southern part of the City and is known as Wildwood Creek. Through erosion, each of these major tributaries have created elevation changes adjacent to these creeks and are sometimes referred to as "benches." These "bench" areas give a character to the City, and the entire northern section of Yucaipa is referred to as the "North Bench."

The flatland portions of the City are gently sloping from the west to the east to the higher elevations toward Oak Glen. These flatter areas contain the "North Bench" area to the north, Dunlap Acres to the west and the Central Core area, which is bisected by Wildwood Creek. Wildwood Creek leads to the southeast, whose canyon and adjacent hills form another distinctive area of Yucaipa known as "Wildwood Canyon." The confluence of the two major creeks through Yucaipa create the Live Oak Canyon area, which is in the southwest portion of the City.

2. Climate:

Temperatures in the Valley range from an average high of 80ºF and an average low of 53ºF. The record high for the area is 117ºF and the record low is 17ºF. The annual average rainfall for the area is 15.6 inches.

The climate is characterized by hot dry summers when temperatures can rise above 100º, and moderate winters, with rare freezing temperatures. A major portion of the precipitation occurs between December and March.

3. Major River/Watersheds:

The Yucaipa watershed encompasses approximately 40 square miles and is generally defined as the area that drains Wilson Creek and Wildwood Creek to Live Oak Canyon. The climate is characterized by hot dry summers when temperatures can rise above 100º, and moderate winters, with rare freezing temperatures. A major portion of the precipitation occurs between December and March. Snow in the upper reaches of the area is possible, but is not considered an important contributing factor to runoff.

The topography of the area is one of steep hills and broad, steeply sloping valleys. Elevations range from about 8,700 feet in the upper reaches of the watershed to about 1,900 feet at the lower end of the watershed.

Wilson Creek divides into three main tributaries, with Gateway Wash as the north fork, Oak Glen Creek the south fork, and Wilson Creek located between the two. The central area of Yucaipa is divided into two main drainage systems, which are the area drained by Chicken Springs Wash (a tributary of Wilson Creek), and the area drained by Yucaipa Creek, which is tributary to Wildwood Creek. Wildwood Creek flows westerly through the southern portion of the watershed and joins Wilson Creek at the City limits.

The watershed also includes several additional areas. They are an area tributary to Mill Creek, a large natural area in the easterly portion which is tributary to Little San Gorgonio Creek, a relatively small area adjacent to the southerly limits (tributary to the Riverside County Channel) whose flows go southwesterly into Riverside County, a relatively small area in the easterly limits along the San Bernardino Freeway (I-10) (and drains into the City of Redlands), and a relatively small area in the northeasterly portion which is tributary to the unincorporated area of Crafton.

4. Population/Demographics:

The City of Yucaipa has a total population 47,438, which is about 2.5% of the total population of San Bernardino County, as of January 1, 2004. With a total of 17,728 housing units and a 5.71% vacancy rate, the number of persons per household is 2.771. According to 2000 census information, 77% of the City's residents are white, 0.9% are black, 0.7% are American Indian, Eskimo or Aleutian, while 1.2% are Asian and Pacific Islander, with 0.1% of the population classified as "other." As a separate figure, not to be added to the total population, 2000 census figures show 7,561 residents classified as "Hispanic Origin of Any Race."

5. Economy:

In 2001, Yucaipa ranked 37th among the 48 Inland Empire cities in retail sales. Taxable sales in 2001 were $145 million. In 2003 the median home price was $195,000 for existing homes; the median price for new homes was $268,500. The City's financial deposits totaled $288 million in 2001. The median income in 2003 was $43,495.

6. Industry:

Located 75 miles east of Los Angeles, with 4 miles of mostly undeveloped frontage on Interstate 10, Yucaipa offers exceptional development opportunities to new or expanding businesses. The City's immediate market area population currently exceeds 60,000 residents, with strong growth projected to occur for several more decades.

Currently, most industrial sites are adjacent to Interstate 10. Existing commercial development is predominately located along Yucaipa Boulevard, from I-10 on the west to Bryant Street on the east. Existing commercial development is not segregated according to uses. For instance, heavy service commercial uses (such as auto repair shops) are located adjacent to general or neighborhood commercial uses.

Section 2 - Jurisdiction Information

2.1 Adoption by local governing body

A Resolution of the City Council of the City of Yucaipa, California, adopting the Local Hazard Mitigation Plan as required by the Disaster Mitigation Act of 2000 (Resolution No. 2005-11) was adopted on February 28, 2005.

The City of Yucaipa Annex is part of the San Bernardino Operational Area Multi-Jurisdictional Hazard Mitigation Plan.

2.1.1 Primary Point of Contact

The Point of Contact for information regarding this plan is:

Jennifer Shankland
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34272 Yucaipa Blvd.
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2.1.2 Promulgation Authority Information

This Hazard Mitigation Plan was reviewed and approved by the following Promulgation Authorities:

Mayor and City Councilmembers
Description of Involvement: Promulgation authorities will consist of the Mayor and City Councilmembers

Contact Information:
City of Yucaipa
34272 Yucaipa Blvd.,
Yucaipa, CA 92399

Associated Files: Resolution No. 2005-11.

The following files are associated with all Promulgation Authorities: *No associated files.*

2.2 Multi-Jurisdictional plan adoption

The City of Yucaipa Annex is part of the San Bernardino Operational Area Multi-Jurisdictional Hazard Mitigation Plan.

Section 3 - Planning Process Documentation and Public Involvement

3.1 Planning Team Member Information

This Hazard Mitigation Plan was compiled and authored by members of the following Planning Team:

John Tooker
City Manager
Description of Involvement: City Manager

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Greg Franklin
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Jennifer Shankland
Director of General Services
Description of Involvement: Director of General Services

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John McMains
Director of Community Development
Description of Involvement: Director of Community Development

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Director of Public Works
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Dave Copley
Director of Community Services
Description of Involvement: Director of Community Services

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Clyde Chittenden
Fire Chief
Description of Involvement: Fire Chief

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Bart Gray
Chief of Police
Description of Involvement: Chief of Police

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The following files are associated the entire Planning Team: *No associated files.*

3.2 Multi-Jurisdictional Planning Team Information

Not Applicable

3.3 Public Involvement Items

Public Involvement consisted of the following items:

San Bernardino Operational Area Coordinating Council
8/5/2004
Description:

Location:
59700 Twentynine Palms Highway, Joshua Tree, CA 92252

Associated Files: No associated files.

San Bernardino County Flood Control
8/5/2004
Description: Assistant Chief, Federal Projects

Discussion pertaining to historical profile regarding past floods in Yucaipa.
Location:
825 E. Third Street, San Bernardino, CA 92415

Associated Files: No associated files.

Earthquake Threat and Vulnerability
6/30/2004
Description: Caltech presented a five-hour program on earthquake history, risk, and predictions of major events that have/could affect the San Bernardino and Inland Empire areas.

Location:
San Bernardino County Board of Supervisors, San Bernardino, CA

Associated Files: No associated files.

Mitigation Plan Training
6/15/2004
Description: Training on the use of the MitigationPlan.com program. This training lasted the entire day and included technical training and discussion about various aspects of mitigation planning.

Location:
1743 Miro Way, Rialto, CA 92376

Associated Files: No associated files.

AARF Terrorism Training/Meeting
5/25/2004
Description: Response to terrorism training/meeting as required annually. Focus on response to terrorism upon our airport facilities.

Location:
San Bernardino International Airport, San Bernardino, CA

Associated Files: No associated files.

San Bernardino Operational Area Coordinating Council
5/13/2004
Description: County presented report regarding Hazard Mitigation Plan development process. The meeting was attended by representatives of the 24 cities in the County of San Bernardino.

Location:
19235 Yucca Loma Road, Apple Valley, CA 92308

Associated Files: No associated files.

OES Operational Hazard Meeting
3/18/2004
Description: Attended Hazard Mitigation Meeting as Yucaipa representative.

Location:
San Bernardino County Public Health Building, Rialto, CA

Associated Files: No associated files.

San Bernardino Operational Area Coordinating Council
2/5/2004
Description: Discussion and update on Hazard Mitigation Planning effort.
Location:
Redlands, CA

Associated Files: No associated files.

San Bernardino Operational Area Coordinating Council
12/4/2003
Description: Report presented regarding Hazard Mitigation Program. The meeting was attended by representatives of the 24 cities in the County of San Bernardino.

Location:
1743 Miro Way, Rialto, CA 92376

Associated Files: No associated files.

SBDO County Hazard Mitigation Planning Meeting
10/16/2003
Description: Organizational/informational meeting regarding our approach to the Hazard Mitigation Plan. Discussed stand-alone plans versus a multi-jurisdictional approach.

Location:
1743 Miro Way, Rialto, CA 92376

Associated Files: No associated files.

Section 4 - Risk Assessment

The goal of mitigation is to reduce the future impacts of a hazard including property damage, disruption to local and regional economies, and the amount of public and private funds spent to assist with recovery. However, mitigation should be based on risk assessment.

A risk assessment is measuring the potential loss from a hazard event by assessing the vulnerability of buildings, infrastructure and people. It identifies the characteristics and potential consequences of hazards, how much of the community could be affected by a hazard, and the impact on community assets. A risk assessment consists of three components: hazard identification, vulnerability analysis and risk analysis. Technically, these are three different items, but the terms are sometimes used interchangeably.

4.1 Hazard Identification

The following is a table represents the Critical Priority Risk Index for each hazard facing the community.

Hazard	Probability	Magnitude/ Severity	Warning Time	Duration	Priority Risk Index
Flooding	High Likely	Critical	6-12 Hours	Less than one week	3.45
Earthquake	High Likely	Critical	Less 6 Hours	Less than 6 hours	3.4
Wildfires	Likely	Critical	Less 6 Hours	Less than one day	3.05
Hazardous Materials	Possible	Limited	Less 6 Hours	Less than 6 hours	2.2
Landslide	Unlikely	Negligible	Less 6 Hours	Less than 6 hours	1.45

The following is a list of each hazard/threat confronting the City of Yucaipa.

Natural Hazards

1. Earthquake

General Definition:

An earthquake is a sudden, rapid shaking of the Earth caused by the breaking and shifting of rock beneath the Earth's surface. For hundreds of millions of years, the forces of plate tectonics have shaped the Earth as the huge plates that form the Earth's surface move slowly over, under, and past each other. Sometimes the movement is gradual. At other times, the plates are locked together, unable to release the accumulating energy. When the accumulated energy grows strong enough, the plates break free causing the ground to shake. Most earthquakes occur at the boundaries where the plates meet; however, some earthquakes occur in the middle of plates.

Ground shaking from earthquakes can collapse buildings and bridges; disrupt gas, electric, and phone service; and sometimes trigger landslides, avalanches, flash floods, fires, and huge, destructive ocean waves (tsunamis). Buildings with foundations resting on unconsolidated landfill and other unstable soil, and trailers and homes not tied to their foundations are at risk because they can be shaken off their mountings during an earthquake. When an earthquake occurs in a populated area, it may cause deaths and injuries and extensive property damage.

Earthquakes strike suddenly, without warning. Earthquakes can occur at any time of the year and

at any time of the day or night. On a yearly basis, 70 to 75 damaging earthquakes occur throughout the world. Estimates of losses from a future earthquake in the United States approach $200 billion.

There are 45 states and territories in the United States at moderate to very high risk from earthquakes, and they are located in every region of the country. California experiences the most frequent damaging earthquakes; however, Alaska experiences the greatest number of large earthquakes—most located in uninhabited areas. The largest earthquakes felt in the United States were along the New Madrid Fault in Missouri, where a three-month long series of quakes from 1811 to 1812 included three quakes larger than a magnitude of 8 on the Richter Scale. These earthquakes were felt over the entire Eastern United States, with Missouri, Tennessee, Kentucky, Indiana, Illinois, Ohio, Alabama, Arkansas, and Mississippi experiencing the strongest ground shaking.

Description:

Geologic Setting

Yucaipa is located in a tectonically active region near the boundary of the Pacific and American crustal plates. This boundary is generally marked by the San Andreas Fault Zone, which extends through the northeastern portion of the City. The San Andreas system of faults exhibits predominantly right strike-slip movement (i.e., horizontal displacement to the right when viewed across the faults), whereby the Pacific Plate moves relatively northwest with respect to the continent. This active tectonic environment has strongly influenced the geologic and physiographic history of the City.

The valley region of San Bernardino County incorporates portions of two major physiographic provinces delineated by tectonic structures--the Transverse Ranges and Peninsular Ranges provinces. The Transverse Ranges province is a structurally complex region of east-west trending mountain ranges and valleys separated by faults. The east-west orientation of structural and physiographic features in this province is unique in California (and in much of North America) and is in marked contrast to the generally north-south trend of adjacent provinces. The origin of this unique orientation is uncertain, with the most probable explanation related to rotational stress fracturing from strike-slip (horizontal) movement along the San Andreas Fault Zone. The combined effects of movement along the San Andreas Fault Zone and the formation and displacement of transverse (east-west) faults have splintered much of the province into a series of small, mobile, crustal blocks. Compressive forces related to displacement along the San Andreas Fault Zone have uplifted a number of these crustal fragments, producing the current topographic profile. These compressive forces are ongoing, with uplift of both the San Gabriel and San Bernardino Mountains continuing up to the present. This has resulted in the level alluviated basins and relatively down dropped crustal blocks which define the current topographic configuration of Yucaipa.

Geologic Formations

Geologic formations in the City may be grouped into three main categories-- alluvium, gneiss/schist and sandstone. The majority of the City rests on alluvial deposits comprised of gravelly, river-washed material located on the "flatlands" and benches. These areas are further differentiated into older and younger alluvial deposits. Older deposits consist of alluvial fan conglomerate called "fanglomerate" and other decomposed clay-rich alluvium. Younger deposits are generally associated with the river wash areas near Oak Glen Creek and Yucaipa Creek.

The rugged Crafton Hills and eastern hills are mainly comprised of gneiss/schist formations which include such minerals as quartzite and marble. This metamorphic rock is distinctive in its multiple folded layers and coarse grain. Sandstone comprises the hilly area at the northern City limits and includes the Yucaipa ridge landform to the north of the City. This sandstone formation is composed of lithified (hardened) non-marine conglomerates and some limestone.

Historical Profile:

A number of active and potentially active fault zones exist within the City. The zones of greatest seismic hazard have been identified as Alquist-Priolo Special Studies Zones. These include the Western Heights fault in the Dunlap Acres area and the south fork of the San Andreas fault zone located across the northeast comer of the City. Ground shaking due to movement of these faults and ground rupture associated with the Western Heights Fault are potential hazards in Yucaipa.

Liquefaction is a process whereby water saturated ground loses coherence and takes on a quicksand-like consistency when shaken by a seismic event. This is possible when groundwater is within approximately 40 feet of the surface, faults exist in the vicinity and geologic formations with a granular nature are present. Such a potential does exist in Yucaipa. Groundwater levels, as shown in Exhibit X-3, Groundwater Elevations, have been determined, through the monitoring of wells in the area, to range historically between over 300 feet and less than 40 feet below the surface of the ground. These levels can fluctuate by as much as 50 feet during a single season. Although the groundwater levels have generally dropped since monitoring began early this century, some areas in the vicinity of Oak Glen Creek, Wilson Creek and Wildwood Canyon have had groundwater levels within 40 feet of the surface as recently as 1984. As described in the preceding discussion of geologic factors, faults and granular (alluvium) soil formations do occur in the City of Yucaipa. The potential for liquefaction fluctuates with the water table. *Associated Files: No associated files.*

2. Flooding

General Definition:

Floods are the most common and widespread of all natural disasters--except fire. Most communities in the United States have experienced some kind of flooding, after spring rains, heavy thunderstorms, or winter snow thaws.

A flood, as defined by the National Flood Insurance Program is: "A general and temporary condition of partial or complete inundation of two or more acres of normally dry land area or of two or more properties (at least one of which is your property) from:

*Overflow of inland or tidal waters, *Unusual and rapid accumulation or runoff of surface waters from any source, or a mudflow. The collapse or subsidence of land along the shore of a lake or similar body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels that result in a flood."

Floods can be slow, or fast rising but generally develop over a period of days. Mitigation includes any activities that prevent an emergency, reduce the chance of an emergency happening, or lessen the damaging effects of unavoidable emergencies. Investing in mitigation steps now, such as, engaging in floodplain management activities, constructing barriers, such as levees, and purchasing flood insurance will help reduce the amount of structural damage to your home and financial loss from building and crop damage should a flood or flash flood occur.

Flooding tends to occur in the summer and early fall because of the monsoon and is typified by increased humidity and high summer temperatures. The standard for flooding is the so-called "100-year flood," a benchmark used by the Federal Emergency Management Agency to establish a standard of flood control in communities throughout the country. Thus, the 100-year flood is also referred to as the "regulatory" or "base" flood.

Actually, there is little difference between a 100-year flood and what is known as the 10-year flood. Both terms are really statements of probability that scientists and engineers use to describe how one flood compares to others that are likely to occur. In fact, the 500-year flood and the 10-year flood are only a foot apart on flood elevation-which means that the elevation of the 100-year flood falls somewhere in between. The term 100-year flood is often incorrectly used and can be misleading. It does not mean that only one flood of that size will occur every 100 years.

What it actually means is that there is a one percent chance of a flood of that intensity and elevation happening in any given year. In other words, it is the flood elevation that has a one percent chance of being equaled or exceeded each year. And it could occur more than once in a relatively short period of time. (By comparison, the 10-year flood means that there is a ten percent chance for a flood of its intensity and elevation to happen in any given year.) Rod Bolin, The Ponca City News, July 18,2002. Page 5-A

Description:

Floods are generally classed as either slow-rise or flash floods. Slow-rise floods may be preceded by a warning time lasting from hours, to days, or possibly weeks. Evacuation and sandbagging for a slow-rise flood may lessen flood related damage. Conversely, flash floods are the most difficult to prepare for, due to the extremely short warning time, if available at all. Flash flood warnings usually require immediate evacuation within the hour.

Areas subject to flooding in Yucaipa are adjacent to the Wilson and Wildwood Creeks. Wilson Creek flows from the North/East to the South/West corner of the Yucaipa City boundary and Wildwood Creek flows in the East to West direction. Floodway areas adjacent to these creeks may be subject to damage and isolation during storm events

Winter storms in the past have caused waters in one or more of the natural drainage channels to overflow on to City streets, parks and private property. Street embankments adjacent to the storm channels have been damaged and required road closure. Normal traffic flow is significantly affected by water and silt deposits in the seven low water crossings.

The only dam in the City is at the Yucaipa Regional Park. A second dam was recently constructed in the east extremity of the Crafton Hills. The limited inundation areas for both of these dams pose only a small hazard.

Historical Profile:

Identification of Flood-prone Areas

Substantial floodplain areas in Yucaipa are generally associated with the dry river washes known as Gateway Wash, Wilson Creek, Oak Glen Creek and Wildwood Creek, as well as Chicken Springs Wash and Yucaipa Creek. These areas have been mapped by the Federal Emergency Management Agency (FEMA) on their Flood Insurance Rate Maps (FIRM). The most recent versions of these maps for the City of Yucaipa were prepared in March of 1996 and are reflected in the Fire and Flood

Hazard Zones. There are two categories of flood zones in Yucaipa; FP1 indicates areas inside the 100-year floodplain, while FP2 indicates areas inside the 500-year floodplain. The majority of the floodplains in Yucaipa are categorized as FP1 and comprise over 1,450 acres. FP2 areas cover over 330 acres.

Associated Files:

File Title: Flood Zone Map
File Description: Flood Zone Map
Uploaded: 8/11/2004

3. Landslide

General Definition:

Landslides are a serious geologic hazard common to almost every state in the United States. It is estimated that nationally they cause up to $2 billion in damages and from 25 to 50 deaths annually. Globally, landslides cause billions of dollars in damage and thousands of deaths and injuries each year. Individuals can take steps to reduce their personal risk. Know about the hazard potential where you live, take steps to reduce your risk, and practice preparedness plans.

Some landslides move slowly and cause damage gradually, whereas others move so rapidly that they can destroy property and take lives suddenly and unexpectedly. Gravity is the force driving landslide movement. Factors that allow the force of gravity to overcome the resistance of earth material to landslide movement include: saturation by water, steepening of slopes by erosion or construction, alternate freezing or thawing, earthquake shaking, and volcanic eruptions.

Landslides are typically associated with periods of heavy rainfall or rapid snow melt and tend to worsen the effects of flooding that often accompanies these events. In areas burned by forest and brush fires, a lower threshold of precipitation may initiate landslides.

Description:

Virtually the entire City of Yucaipa has been determined to be at very low to moderate risk of landslide hazard. Low to moderate ratings are generally associated with the river wash and hilly areas. One small portion of the northeast corner of the City has been found to have a moderate to high susceptibility to landslides and contains two mapped landslide areas. These areas correspond to the sandstone geologic formation described above.

Historical Profile: Associated Files: No associated files.

4. Wildfires

General Definition:

There are three different classes of wild land or wildfires. A surface fire is the most common type and burns along the floor of a forest, moving slowly and killing or damaging trees. A ground fire is usually started by lightning and burns on or below the forest floor. Crown fires spread rapidly by wind and move quickly by jumping along the tops of trees. Wildfires are usually signaled by dense smoke that fills the area for miles around. Wildfires present a significant potential for disaster in the southwest, a region of relatively high temperatures, low humidity, and low precipitation during

the summer, and during the spring, moderately strong daytime winds. Combine these severe burning conditions with people or lightning and the stage is set for the occurrence of large, destructive wildfires.

Description:

High temperatures, low humidity, and clear sunny days characterize summer months. Thunderstorms from July through September can create lightning strikes, erratic high winds and, sometimes, heavy rains.

The City of Yucaipa is bordered by hills, mountains, open fields and undeveloped lots contiguous to residential development. Residential landscaping, fencing and outbuildings increase fuel loading, spotting and fire intensity.

Fire prevention strategies concentrate on educating the public and enforcement of fire codes. Fire suppression strategies focus around containment and control while protecting structures in the threatened areas. Suppression activities may utilize natural firebreaks; direct suppression of the fire by hose lines, aircraft, bulldozers and hand crews; increasing defensible spaces around homes; utilizing fire suppression foams; and mop up and total extinguishment of the fire.

Wildland fires are a threat in any fire season. In 1997 a fire in the hills in the northeast portion of the City burned the natural vegetation in about 20,000 acres of land. Although no homes were destroyed, the loss of vegetation resulted in considerable debris being washed down over roads on into a park. *Associated Files: No associated files.*

Technology Hazards

1. Hazardous Materials

General Definition:

Dangerous situations caused by the unintentional dispersion of hazardous materials.

Description:

Hazardous materials incidents can occur either in transit or at a fixed facility. The United States and Southern California in particular, have taken part in the rapid and innovative development of new technologies and technological and chemical processes. One crucial result of these developments has been the purification and synthesis of chemical elements and compounds, which have proven highly toxic. Hazardous material, including injurious substances such as: pesticides, herbicides, toxic metals and chemicals, liquefied natural gas, explosives, volatile chemicals, and nuclear fuels and waste products have become prevalent in both industrial and commercial activities.

Historical Profile:

Many forms of hazardous materials are present in both rural and urban areas of the City of Yucaipa. They may be present in permanent storage locations, roadway and railway transport mediums, long-distance pipelines, and at various industrial and agricultural application sites. Yucaipa's proximity to rail and highway transportation routes and various light industries, has a growing potential for serious hazardous materials incidents. Trucks heavily travel Interstate 10.

They carry every conceivable type of hazardous material including gasoline, rocket fuels, pesticides and radioactive materials. Interstate 10 is considered the major route of entry and exit of most major hazardous materials in the San Bernardino and Los Angeles Basins.

Associated Files: No associated files.

The following files are associated with all Hazards: *No associated files.*

4.2 Hazard Profile

The CPRI factors the elements of risk: Probability (P), Magnitude/Severity (M), Warning Time (WT) and Duration to create an index which allows for the prioritization of mitigation activities based on the level of risk. The following hazards are listed in order of decreasing CPRI score.

Natural Hazards

Earthquake

Historical Events

The following section lists and describes the historical events associated with this hazard in City of Yucaipa.

1. Big Bear 6/28/1992

LOCATION 34° 12' N, 116° 49.6' W 8 km (5 miles) SE of Big Bear Lake 40 km (25 miles) east of San Bernardino

MAGNITUDE MS6.4

TYPE OF FAULTING left-lateral strike-slip - ANIMATION

DEPTH 5 km

While technically an "aftershock" of the Landers earthquake, the Big Bear earthquake occurred over 40 km west of the Landers rupture, on a fault with a different orientation and sense of slip than those involved in the main shock -- an orientation and slip which could be considered "conjugate" to the faults which slipped in the Landers rupture. The Big Bear earthquake rupture did not break the surface; in fact, no surface trace of a fault with the proper orientation has been found in the area. However, the earthquake produced its own set of aftershocks, and from these, we know the fault geometry -- left-lateral slip on a northeast-trending fault. Following the Landers mainshock by three hours, the Big Bear earthquake caused a substantial amount of damage in the Big Bear area. Landslides triggered by the jolt-blocked roads in the San Bernardino Mountains.

Hazard: Earthquake
Deaths: N/A
Injuries: N/A
Displaced People: N/A
Big Bear, CA

Associated Files

File Title: Historical Earthquakes in Southern CA
Uploaded: 8/10/2004
Uploaded File Name: 454136917-107-HistoricEarthquakesinSoCA.pdf
File Description: Historical Earthquakes in Southern CA

2. Landers 6/28/1992

LOCATION 34° 13' N, 116° 26' W 6 miles north of Yucca Valley

MAGNITUDE MW7.3

TYPE OF FAULTING right-lateral strike-slip - ANIMATION

RUPTURE LENGTH 85 km (53 miles)

FAULTS RUPTURED Johnson Valley, Landers, Homestead Valley, Emerson, and Camp Rock; several other faults experienced minor rupture, rupture during large aftershocks, or triggered slip

AVERAGE SLIP about 3 to 4 meters; maximum slip of 6 meters DEPTH 1.1 km

LARGEST AFTERSHOCK Big Bear earthquake, MS 6.4

(Source: Southern California Earthquake Data Center)

Hazard: Earthquake
Deaths: N/A
Injuries: N/A
Displaced People: N/A
Landers, CA
Associated Files No files associated with this item.

3. San Jacinto 7/22/1923

LOCATION 34° 00' N, 117° 15' W 11 km (7 miles) south of San Bernardino about 88 km (55 miles) east of Los Angeles

MAGNITUDE ML6.3

TYPE OF FAULTING right-lateral strike-slip - ANIMATION

FAULT INVOLVED: San Jacinto fault

Saunders (1986) indicates that the sparse instrumental and intensity data for this event are consistent with a location on the San Jacinto fault zone near Loma Linda. Richter (1958) estimated M6.2 for this event. Doser (1992) found that results of seismic waveform modeling for the 1923 event are more consistent with rupture on the SJFZ than rupture along the San Andreas Fault or buried cross fault. Damage from this quake, which awoke

sleepers across southern California, was greatest in San Bernardino and Redlands, though it consisted primarily of minor damage.

(Source: Southern California Earthquake Data Center)

Hazard: Earthquake
Deaths: N/A
Injuries: N/A
Displaced People: N/A
Near Loma Linda, CA
Associated Files No files associated with this item.

4. San Jacinto 4/21/1918

LOCATION 33° 45' N, 116° 53' W near the town of San Jacinto about 112 km (70 miles) ESE of Los Angeles

MAGNITUDE ML6.8

TYPE OF FAULTING right-lateral strike-slip - ANIMATION

FAULT INVOLVED: San Jacinto fault

The shaking cracked the ground, concrete roads, and concrete irrigating canals, but none of the cracks left behind were thought to represent actual surface rupture. The earthquake caused minor damage outside the San Jacinto area and was felt as far away as Taft (west of Bakersfield), Seligman (Arizona), and Baja California.

(Source: California Earthquake Data Center)

Hazard: Earthquake
Deaths: N/A
Injuries: N/A
Displaced People: N/A
Hemet, CA
Associated Files No files associated with this item.

5. Fort Tejon 1/9/1857

LOCATION 35° 43' N, 120° 19' W about 72 km (45 miles) northeast of San Luis Obispo, about 120 km (75 miles) northwest of Bakersfield, as shown on the map (epicenter location uncertain).
MAGNITUDE MW8.0 (approx.)

TYPE OF FAULTING right-lateral strike-slip - ANIMATION

FAULT RUPTURED San Andreas fault

LENGTH OF SURFACE RUPTURE about 360 km (225 miles)

MAXIMUM SURFACE OFFSET about 9 meters (30 feet)

The Fort Tejon earthquake of 1857 was one of the greatest earthquakes ever recorded in the U.S., and left an amazing surface rupture scar over 350 kilometers in length along the San Andreas fault.

(Source: Southern California Earthquake Data Center)

Hazard: Earthquake
Deaths: N/A
Injuries: N/A
Displaced People: N/A
Associated Files No files associated with this item.

The following table summarizes the occurrences, impact and costs of this hazard.

(Dollar Amounts in Thousands)

Hazard: Earthquake		**Response and Recovery Costs**					
Name	Date	City Town	County	State	Federal	Other	Total
Big Bear	6/28/1992	$0	$0	$0	$0	$0	$0
Landers	6/28/1992	$0	$0	$0	$0	$0	$0
San Jacinto	7/22/1923	$0	$0	$0	$0	$0	$0
San Jacinto	4/21/1918	$0	$0	$0	$0	$0	$0
Fort Tejon	1/9/1857	$0	$0	$0	$0	$0	$0
Totals:		$0	$0	$0	$0	$0	$0

Calculated Priority Risk Index (CPRI)

Probability: **4 Highly Likely**

Magnitude/Severity: **3 Critical**

Warning Time: **4 Less 6 Hours**

Duration: **1 Less than 6 hours**

The CPRI for the Earthquake hazard for City of Yucaipa is:

Probability + Magnitude/Severity + Warning Time + Duration = CPRI

4 x .45 + **3** x .30 + **4** x .15 + **1** x .10 = **3.4**

Flooding

Historical Events

The following section lists and describes the historical events associated with this hazard in City of Yucaipa.

1. Nov 2002 Stream Flood 11/30/2002

(Source: http://www4.ncdc.noaa.gov)

Hazard: Flooding
Deaths: N/A
Injuries: N/A
Displaced People: N/A
Associated Files No files associated with this item.

2. Aug 1999 Flash Flood 7/11/1999

Thunderstorms developed along the mountains to the south of Forest Falls/Mill Canyon and moved down the south slopes across Oak Glen, Cherry Valley, Beaumont, and Banning. As the flood waters moved south down the Little San Gorgonio Creek and the San Gorgonio River, the thunderstorms also moved south, dropping additional heavy rain. Several accidents along Interstate 10 in the Banning Pass were also attributed to the poor visibility and cars hydroplaning in the heavy rain. Minor flooding was reported in southeast Yucaipa and Calimesa along Wildwood Creek.

(Source: http://www4.ncdc.noaa.gov)

Hazard: Flooding
Deaths: N/A
Injuries: N/A
Displaced People: N/A
Associated Files No files associated with this item.

3. Storm 95-2 1/11/1995

Torrential rains caused a surge of water to rush through about twenty homes in Yucaipa.

ER-3042 (004)

(Source: http://www4.ncdc.noaa.gov)

Hazard: Flooding
Deaths: N/A
Injuries: N/A
Displaced People: N/A
Yucaipa Blvd. (10th - 15th & Oak Glen Rd.), Yucaipa, CA 92399
Associated Files No files associated with this item.

4. Storm 93-1 2/2/1993

ER-2448 (002)

Hazard: Flooding
Deaths: N/A
Injuries: N/A
Displaced People: N/A
13th/Yucaipa Blvd. & Outer Hwy Bridge, Yucaipa, CA 92399
Associated Files No files associated with this item.

5. Feb 1969 Flood 2/25/1969

Flood damages along Yucaipa Creek were more than 15 times greater in February than in January 1969. Most damages from Yucaipa Creek floodflows were the result of a huge mudflow from Wildwood Canyon. The stream of mud from the confines of Wildwood Canyon spread out into the Yucaipa Valley area and affected about 40 homes and several apartment buildings and establishments.

Mud 5-feet deep was deposited over an area of about 30 acres, and mud about 2-feet deep was deposited over an area of about 300 acres. Several streets and many waterlines in Yucaipa were washed out as the mudflow moved westward toward Interstate Highway 10. The mudflow severely eroded the highway embankment and the wingwalls and damaged fencing. Silt and debris were deposited on roads and in a roadside rest area. Heavy agricultural damages were sustained by a chicken ranch, where about 10,000 chickens were destroyed, and by citrus groves inundated by mudflow. In Live Oak Canyon, west of Interstate Highway 10, the Live Oak Canyon Road Bridge was washed out.

Floodflows on minor streams in the Yucaipa area (including Ford and Birch Canyons and unnamed streams north of Wilson Creek, south of Oak Glen Creek, and north of Wildwood Canyon) caused little new damage in February, mostly because of the widespread damages in January. The three unnamed streams caused only minor damaged to San Bernardino Valley Municipal Water District pipelines.

The unnamed stream north of Wildwood Canyon caused one roadway washout at 6th Street in Yucaipa.

The February flood inundated the same area that was flooded in January and other areas that were undamaged in January. The depth of flow in February was greater than in January. Floodwaters flowed over Yucaipa Boulevard and eroded foundation and supporting materials at the bridge abutments. In the Dunlap Acres area, about 180 homes were flooded, and the Dunlap Acres Elementary School was inundated by floodwaters and mud 5-feet deep. The floodwaters also inundated parts of 12th, 13th, 14th, "E", "D", and Kentucky Streets, Dunlap Boulevard, and Interstate Highway 10. About 400 acres were flooded to depths of 5 feet and silt deposition in some areas reached depths of 4 feet. About 300 families were evacuated during the flood.

(Source: San Bernardino County Flood Control District, "Floods of the Past")

Hazard: Flooding
Deaths: N/A

Injuries: N/A
Displaced People: N/A
Associated Files No files associated with this item.

6. Jan 1969 Flood 1/25/1969

Floodflows on Yucaipa Creek damaged agricultural property, levees, and roads in scattered areas along the entire length of the stream. Eroding floodflows and debris deposition destroyed fences, pastures, and fodder crops. Light levee erosion and road damages also occurred along Yucaipa Creek. The road damages consisted mostly of shoulder erosion.

Floodflows affected minor streams in the Yucaipa area, including Ford and Birch Canyons and unnamed streams north of Wilson Creek, south of Oak Glen Creek, and north of San Bernardino Valley Municipal Water District facilities. Most damage consisted of eroded or washed-out pipelines, pipe supports, and minor structures including water wells, intake structures, valves, and vaults. The most expensive single incident of damage to the water supply system occurred in Birch Canyon, where the cost of repairs to the intake structure and adjacent pipelines was estimated at $18,000. In addition to damaging the water supply system, floodflows on Birch Creek eroded small reaches of levees.

Floodflows from the unnamed stream north of Wilson Creek caused minor damages to pavement and shoulders when it overflowed Fremont Street.

Floodflows on Wilson Creek damaged residential, business, and agricultural property, flood control works, streets, sewers, and other public property along the reach extending from Yucaipa Boulevard to Interstate Highway 10. Property in that area was damaged when floodwaters overtopped the west channel banks near 11th and "D" Streets in the western part of the town. The flood inundated about one-third of an area (about 1 mile wide and 2 miles long) known as the Dunlap Acres area. The flood caused moderate to heavy damage to about 150 homes. The most severely damaged homes were those at the corner of 12th and "E" Streets, where homes were flooded to depths of 3 feet and mud was deposited in the homes to depths of 2 feet. A trailer park adjacent to Dunlap Boulevard was severely damaged when 2 feet of mud and water inundated the trailers and the trailer park. The floodwaters eroded an orchard southwest of the corner of 12th and "E" Streets and deposited about a 2-foot layer of silt in other parts of the orchard. The Wilson Creek Channel was filled with more than 4-feet of sediment.

The pipe-and-wire revetments were barely visible under the heavy load of sediment. Floodflows on Oak Glen Creek caused fairly extensive damage to roads and flood control and water supply facilities.

(Source: San Bernardino County Flood Control District, "Floods of the Past")

Hazard: Flooding
Deaths: N/A
Injuries: N/A
Displaced People: N/A
Associated Files No files associated with this item.

7. Aug 1967 Flood 8/23/1967

Heavy flooding occurred in Yucaipa areas. The heaviest damage to homes was along 13th Street, south of Yucaipa Boulevard. Large chunks of pavement were ripped from the Boulevard and washed southward along 13th Street.

(Source: San Bernardino County Flood Control District, "Floods of the Past")

Hazard: Flooding
Deaths: N/A
Injuries: N/A
Displaced People: N/A
Associated Files No files associated with this item.

8. Dec 1966 Flood 12/8/1966

There was heavy erosion along Wilson Creek from Yucaipa Boulevard to 13th Street. There was also quite a bit of erosion on Wildwood Creek from the Interstate 10 to Bryant Street.

(Source: San Bernardino County Flood Control District, "Floods of the Past")

Hazard: Flooding
Deaths: N/A
Injuries: N/A
Displaced People: N/A
Associated Files No files associated with this item.

9. Aug 1965 Flood 8/14/1965

A sudden storm flooded Wildwood Canyon with rampaging waters that crossed Wildwood Canyon Road. At the peak of the runoff, which continued for about an hour, the water level filled the drainage pipes under California Street and flooded the road above. Third Street and Bryant Street were both washed out.

(Source: San Bernardino County Flood Control "Floods of the Past")

Hazard: Flooding
Deaths: N/A
Injuries: N/A
Displaced People: N/A
Associated Files No files associated with this item.

10. April 1965 Flood 4/10/1965

Water running off the new Yucaipa High School site gouged a ravine and emptied mud onto Yucaipa Boulevard.

(Source: San Bernardino County Flood Control "Floods of the Past")

Hazard: Flooding

Deaths: N/A
Injuries: N/A
Displaced People: N/A
Associated Files: *No files associated with this item.*

The following table summarizes the occurrences, impact and costs of this hazard.

(Dollar Amounts in Thousands)

Hazard: Flooding		**Response and Recovery Costs**					
Name	Date	City Town	County	State	Federal	Other	Total
Nov 2002 Stream Fld	11/30/2002	$100	$0	$0	$0	$0	$100
Aug 1999 Flash Flood	7/11/1999	$85	$0	$0	$0	$0	$85
Storm 95-2	1/11/1995	$66	$0	$0	$22	$0	$88
Storm 93-1	2/2/1993	$63	$0	$0	$33	$0	$97
Feb 1969 Flood	2/25/1969	$0	$0	$0	$0	$0	$0
Jan 1969 Flood	1/25/1969	$0	$0	$0	$0	$0	$0
Aug 1967 Flood	8/23/1967	$0	$0	$0	$0	$0	$0
Dec 1966 Flood	12/8/1966	$0	$0	$0	$0	$0	$0
Aug 1965 Flood	8/14/1965	$0	$0	$0	$0	$0	$0
April 1965 Flood	4/10/1965	$0	$0	$0	$0	$0	$0
Totals:		$315	$0	$0	$55	$0	$370

Calculated Priority Risk Index (CPRI)

Probability: **4 Highly Likely**

Magnitude/Severity: **3 Critical**

Warning Time: **3 6-12 Hours**

Duration: **3 Less than one week**

The CPRI for the Flooding hazard for City of Yucaipa is:

Probability + Magnitude/Severity + Warning Time + Duration = CPRI

4 x .45 + **3** x .30 + **3** x .15 + **3** x .10 = **3.45**

Landslide

Historical Events

The following section lists and describes the historical events associated with this hazard in City of Yucaipa. *No Documented Historical Hazard On File*

Calculated Priority Risk Index (CPRI)

Probability: **1 Unlikely**

Magnitude/Severity: **1 Negligible**

Warning Time: **4 Less 6 Hours**

Duration: **1 Less than 6 hours**

The CPRI for the Landslide hazard for City of Yucaipa is:

Probability	+	Magnitude/Severity	+	Warning Time	+	Duration	=	CPRI
1 x .45	+	**1** x .30	+	**4** x .15	+	**1** x .10	=	**1.45**

Wildfires

Historical Events

The following section lists and describes the historical events associated with this hazard in City of Yucaipa.

1. Aug 2003 Wildfire 8/15/2003

Named the Wildwood Canyon Fire, this wildfire burned 200 acres of state park and national forest land before being fully contained. No property was damaged.

(Source: http://www4.ncdc.noaa.gov)

Hazard: Wildfires
Deaths: 0
Injuries: 1
Displaced People: 15
Wildwood Canyon, Yucaipa, CA 92399
Associated Files: *No files associated with this item.*

2. Oct 2001 Fire 10/21/2001

Santa Ana winds fanned several brush fires, and started several others by banging power lines together. Smoke and the proximity of flames prompted the evacuation of students at Crafton Hills College, located in Yucaipa.

(Source: http://www4.ncdc.noaa.gov)

Hazard: Wildfires
Deaths: 0
Injuries: 0
Displaced People: 6
Crafton Hills, Yucaipa, CA 92399 *Associated Files*: *No files associated with this item.*

3. Bryant Fire 7/8/2001

This fire burned 680 acres. The fire started just outside our City limits, at County Line Road, and burned into our City limits, to the east. One home sustained $80,000 damage.

Hazard: Wildfires
Deaths: 0
Injuries: 4
Displaced People: 125
Diamond Point Drive, Yucaipa, CA 92399
Associated Files: *No files associated with this item.*

4. Aug 1998 Fire 8/31/1998

A 30-acre blaze threatened several homes in Yucaipa and forced the closure of Highway 38 before rain and fire fighters brought it under control.

(Source: http://www4.ncdc.noaa.gov)

Hazard: Wildfires
Deaths: 0
Injuries: 3
Displaced People: 12
Highway 38, Mentone/Yucaipa, CA 92399
Associated Files: *No files associated with this item.*

5. Fremont Fire 10/29/1997

This fire burned 180 acres. The fire started within the northeast boundary of the City, just above one of our mobilehome parks. No structures were lost.

Hazard: Wildfires
Deaths: 0
Injuries: 0
Displaced People: 88
Fremont Mobile Home Park, Yucaipa, CA 92399
Associated Files: *No files associated with this item.*

6. Bluff Fire 10/17/1995

This fire burned 2,200 acres. The fire started in Banning and was wind driven to the west into Yucaipa.

Hazard: Wildfires
Deaths: 0
Injuries: 4
Displaced People: 155
Banning Bench, Banning/Cherry Valley/Yucaipa, CA 92399
Associated Files: *No files associated with this item.*

7. Mill Creek Fire 10/27/1993

This was a 4,600-acre fire that started north of the City limits during a Santa Ana wind event. Cause was downed power lines. The fire burned 12 homes and 8 outbuildings, however all of the destroyed structures were in the unincorporated County area, just outside the City limits. The fire burned over the Crafton Hills and threatened numerous homes in the City limits.

Hazard: Wildfires
Deaths: 0
Injuries: 3
Displaced People: 78
San Bernardino County/Yucaipa, Mentone/Yucaipa, CA 92399
Associated Files: *No files associated with this item.*

8. Wash Fire 7/17/1987

This fire burned 80-acres and burned through a wash that bisected the northern part of the City.

Hazard: Wildfires
Deaths: 0
Injuries: 2
Displaced People: 38
2nd Street to Pendleton Wash, Yucaipa, CA 92399
Associated Files: *No files associated with this item.*

The following table summarizes the occurrences, impact and costs of this hazard.

(Dollar Amounts in Thousands)

Hazard: Wildfires		**Response and Recovery Costs**					
Name	Date	City Town	County	State	Federal	Other	Total
Aug 2003 Wildfire	8/15/2003	$6	$0	$196	$64	$0	$266
Oct 2001 Fire	10/21/2001	$2	$2	$15	$3	$0	$22
Bryant Fire	7/8/2001	$4	$3	$190	$22	$0	$219
Aug 1998 Fire	8/31/1998	$2	$9	$8	$0	$0	$18
Fremont Fire	10/29/1997	$2	$24	$46	$6	$0	$78
Bluff Fire	10/17/1995	$1	$370	$510	$300	$0	$1,181
Mill Creek Fire	10/27/1993	$16	$500	$300	$0	$0	$816
Wash Fire	7/17/1987	$3	$222	$162	$0	$0	$387
Totals:		$36	$1,130	$1,427	$395	$0	$2,986

Calculated Priority Risk Index (CPRI)

Probability: **3 Likely**

Magnitude/Severity: **3 Critical**

Warning Time: **4 Less 6 Hours**

Duration: **2 Less than one day**

The CPRI for the Wildfires hazard for City of Yucaipa is:

Probability	+	Magnitude/Severity	+	Warning Time	+	Duration	=	CPRI
3 x .45	+	**3** x .30	+	**4** x .15	+	**2** x .10	=	**3.05**

Technology Hazards

Hazardous Materials

Historical Events

The following section lists and describes the historical events associated with this hazard in City of Yucaipa.

No Documented Historical Hazard On File

Calculated Priority Risk Index (CPRI)

Probability: **2 Possible**

Magnitude/Severity: **2 Limited**

Warning Time: **4 Less 6 Hours**

Duration: **1 Less than 6 hours**

The CPRI for the Hazardous Materials hazard for City of Yucaipa is:

Probability	+	Magnitude/Severity	+	Warning Time	+	Duration	=	CPRI
2 x .45	+	**2** x .30	+	**4** x .15	+	**1** x .10	=	**2.2**

4.3 Vulnerability Assessment

4.3.1 Asset Inventory

The total population of City of Yucaipa that is vulnerable is approximately 47,427.

4.3.1.1 Community Asset Overview

This section provides an overview of the assets in City of Yucaipa.

Critical Facilities:

The critical municipal facilities that are located in the City include: City Hall, Yucaipa Fire Station, Crafton Hills Fire Station, Police Station, Community Centers, Public Works Yard, Records Center, and various bridges and roads.

Non-Critical Facilities:

Non-critical municipal facilities include various bridges and roads in the community.

The following files are associated with all Assets in the Community: *No associated files.*

4.3.1.2 Critical Facility List

This section provides a listing of the Critical Facilities in City of Yucaipa.

Police Station
Police Stations
Size: 5646
Facility Description: Police Station Facility consisting of a single story 5,646 square foot building.

Primary Contact:
Bart Gray
34282 Yucaipa Blvd., Yucaipa, CA 92399
Phone: 909/790-3105
Fax:
E-mail: bgray@sbcsd.org
Associated Files: No associated files.

Yucaipa Station #551
Fire Stations
Size: 6200
Facility Description: The Fire Station consists of 6,200 square feet and houses four fire engines and one fire chief's vehicle. This station is staffed with 10 to 21 persons 365 days a year.

Primary Contact:
Clyde Chittenden, Fire Chief
11416 Bryant Street, Yucaipa, CA 92399
Phone: (909) 797-2224
Fax: (909) 797-1764
E-mail: clyde.chittenden@fire.ca.gov
Associated Files: No associated files.

Crafton Hills Station #552
Fire Stations
Size: 5800
Facility Description: This Fire Station consists of 5,800 square feet and houses four fire engines and one rescue squad. This station is staffed by three to six persons 365 days a year.

Primary Contact:
Clyde Chittenden, Fire Chief
32664 Yucaipa Blvd, Yucaipa, CA 92399
Phone: (909) 797-2224
Fax: (909) 797-1764
E-mail: clyde.chittenden@fire.ca.gov
Associated Files: No associated files.

City Hall
Government Facilities
Size: 19956
Facility Description: Yucaipa City Hall consists of one 19,956 square foot single story facility. Newly constructed (2004).

Primary Contact:
Jennifer Shankland
34272 Yucaipa Blvd., Yucaipa, CA 92399
Phone: 909/797-2489
Fax: 909/790-9203
E-mail: jshankland@yucaipa.org
Associated Files: No associated files.

Public Works Yard
Government Facilities
Size: 6100
Facility Description: The Public Works Yard consists of three prefab steel structures, housing one 3-stall garage (with offices) and two single-stall garages.

Primary Contact:
Chuck Collett
11377 2nd Street, Yucaipa, CA 92399
Phone: 909/797-2489
Fax: 909/790-9203
E-mail: ccollett@yucaipa.org
Associated Files: No associated files.

Yucaipa Community Center
Government Facilities
Size: 24462
Facility Description: Yucaipa Community Center consists of a 24,462 square foot single story building. Newly constructed (2003). This facility also serves as an American Red Cross Shelter.

Primary Contact:
Dave Copley
34900 Oak Glen Road, Yucaipa, CA 92399
Phone: 909/797-2489
Fax: 909/790-9203
E-mail: dcopley@yucaipa.org
Associated Files: No associated files.

Scherer Community Center
Government Facilities
Size: 7000
Facility Description: The Scherer Community Center consists of a 7,000 square foot single story building. The Center offers programs and activities for senior citizens. The adjacent Nutrition Center provides the Senior Nutrition Program.

Primary Contact:
Dave Copley
12202 1st Street, Yucaipa, CA 92399
Phone: 909/797-2489
Fax: 909/790-9203
E-mail: dcopley@yucaipa.org
Associated Files: No associated files.

Records Center
Government Facilities
Size: 1600
Facility Description: This facility houses all records generated by the City.

Primary Contact:
Chuck Collett
11373 2nd Street, Yucaipa, CA 92399
Phone: 909/797-2489
Fax: 909/790-9203
E-mail: ccollett@yucaipa.org
Associated Files: No associated files.

Yucaipa Blvd. Bridge
Major Roads/Bridges
Size: 0
Facility Description: Yucaipa Boulevard Bridge.

Primary Contact:
Ray Casey
Yucaipa Boulevard, Yucaipa, CA 92399
Phone: 909/797-2489
Fax: 909/790-9203
E-mail: rcasey@yucaipa.org
Associated Files: No associated files.

14th Street Bridge
Major Roads/Bridges
Size: 0
Facility Description: 14th Street Bridge.

Primary Contact:
Ray Casey
14th Street & WW Creek, Yucaipa, CA 92399
Phone: 909/797-2489
Fax: 909/790-9203
E-mail: rcasey@yucaipa.org
Associated Files: No associated files.

Bryant Street Bridge
Major Roads/Bridges
Size: 0
Facility Description: Bryant Street Bridge.

Primary Contact:
Ray Casey
Bryant & WW Creek, Yucaipa, CA 92399
Phone: 909/797-2489
Fax: 909/790-9203
E-mail: rcasey@yucaipa.org
Associated Files: No associated files.

5th Street Bridge
Major Roads/Bridges
Size: 0
Facility Description: 5th Street Bridge.

Primary Contact:
Ray Casey
Yucaipa, CA 92399
Phone: 909/797-2489
Fax: 909/790-9203
E-mail: rcasey@yucaipa.org
Associated Files: No associated files.

Avenue "E" Bridge
Major Roads/Bridges
Size: 0
Facility Description: Avenue E Bridge.

Primary Contact:
Ray Casey
Ave. E & Wilson Creek, Yucaipa, CA 92399
Phone: 909/797-2489
Fax: 909/790-9203
E-mail: rcasey@yucaipa.org
Associated Files: No associated files.

Yucaipa Boulevard
Major Roads/Bridges
Size: 2112000
Facility Description: Yucaipa Boulevard, including pavement, curb and gutter.

Primary Contact:
Ray Casey
Yucaipa Boulevard, Yucaipa, CA 92399
Phone: 909/797-2489
Fax: 909/790-9203
E-mail: rcasey@yucaipa.org
Associated Files: No associated files.

Name	Facility Type	Critical Rank
Police Station	Police Stations	Critical
Yucaipa Station #551	Fire Stations	Critical
Crafton Hills Station #552	Fire Stations	Critical
City Hall	Government Facilities	High
Public Works Yard	Government Facilities	High
Yucaipa Community Center	Government Facilities	High
Scherer Community Center	Government Facilities	Average
Records Center	Government Facilities	Average
Yucaipa Blvd. Bridge	Major Roads/Bridges	Average
14th Street Bridge	Major Roads/Bridges	Average
Bryant Street Bridge	Major Roads/Bridges	Average
5th Street Bridge	Major Roads/Bridges	Average
Avenue "E" Bridge	Major Roads/Bridges	Average
Yucaipa Boulevard	Major Roads/Bridges	Critical

4.3.1.3 Non-Critical Facility List

This section provides a listing of the Non-Critical Facilities in City of Yucaipa.

Oak Glen Road
High Traffic Areas
Size: 1664000
Facility Description: Oak Glen Road, including pavement, curb and gutter.

Primary Contact:
Ray Casey
Oak Glen Road, Yucaipa, CA 92399
Phone: 909/797-2489
Fax: 909/790-9203
E-mail: rcasey@yucaipa.org
Associated Files: No associated files.

5th Street
High Traffic Areas
Size: 1011200
Facility Description: 5th Street, including pavement, curb and gutter.

Primary Contact:
Ray Casey
5th Street, Yucaipa, CA 92399
Phone: 909/797-2489
Fax: 909/790-9203
E-mail: rcasey@yucaipa.org
Associated Files: No associated files.

Bryant Street
High Traffic Areas
Size: 1843200
Facility Description: Bryant Street, including pavement, curb and gutter.

Primary Contact:
Ray Casey
Bryant Street, Yucaipa, CA 92399
Phone: 909/797-2489
Fax: 909/790-9203
E-mail: rcasey@yucaipa.org
Associated Files: No associated files.

Avenue E
High Traffic Areas
Size: 1536000
Facility Description: Avenue E, including pavement, curb and gutter.

Primary Contact:
Ray Casey
Avenue E, Yucaipa, CA 92399
Phone: 909/797-2489
Fax: 909/790-9203
E-mail: rcasey@yucaipa.org
Associated Files: No associated files.

Wildwood Canyon Road
High Traffic Areas
Size: 2304000
Facility Description: Wildwood Canyon Road, including pavement, curb and gutter.

Primary Contact:
Ray Casey
Wildwood Canyon Road, Yucaipa, CA 92399
Phone: 909/797-2489
Fax: 909/790-9203
E-mail: rcasey@yucaipa.org
Associated Files: No associated files.

Colorado Street
High Traffic Areas
Size: 537600
Facility Description: Colorado Street, including pavement, curb and gutter.

Primary Contact:
Ray Casey
Colorado Street, Yucaipa, CA 92399
Phone: 909/797-2489
Fax: 909/790-9203
E-mail: rcasey@yucaipa.org
Associated Files: No associated files.

California Street
High Traffic Areas
Size: 768000
Facility Description: California Street, including pavement, curb and gutter.

Primary Contact:
Ray Casey
California Street, Yucaipa, CA 92399
Phone: 909/797-2489
Fax: 909/790-9203
E-mail: rcasey@yucaipa.org
Associated Files: No associated files.

Sand Canyon/14th Street
High Traffic Areas
Size: 947200
Facility Description: Sand Canyon/14th Street, including pavement, curb and gutter.

Primary Contact:
Ray Casey
Sand Canyon/14th Street, Yucaipa, CA 92399
Phone: 909/797-2489
Fax: 909/790-9203
E-mail: rcasey@yucaipa.org
Associated Files: No associated files.

Outer Highway So.
High Traffic Areas
Size: 704000
Facility Description: Outer Highway So.

Primary Contact:
Ray Casey
Outer Highway So., Yucaipa, CA 92399
Phone: 909/797-2489
Fax: 909/790-9203
E-mail: rcasey@yucaipa.org
Associated Files: No associated files.

Name	Facility Type	Critical Rank
Oak Glen Road	High Traffic Areas	Average
5th Street	High Traffic Areas	Average
Bryant Street	High Traffic Areas	Average
Avenue E	High Traffic Areas	Average
Wildwood Canyon Road	High Traffic Areas	Average
Colorado Street	High Traffic Areas	Average
California Street	High Traffic Areas	Average
Sand Canyon/14th Street	High Traffic Areas	Average
Outer Highway So.	High Traffic Areas	Average

4.3.1.4 Individual Hazard Vulnerability Analysis

This section serves to identify each hazard confronting the community and its vulnerabilities to that hazard.

Natural Hazards

1. Earthquake

a. Population. Approximately 5.29 percent of the community's population is vulnerable.

b. Critical Facilities.

(1) Approximately 100 percent of the community's critical facilities is vulnerable.
(2) The specific critical facilities vulnerable in City of Yucaipa are:
All facilities. See the complete facilities list.

c. Non-Critical Facilities.

(1) Approximately 100 percent of the community's Non-Critical Facilities are vulnerable.
(2) The specific Non-Critical Facilities vulnerable in City of Yucaipa are:
All facilities. See the complete facilities list.

2. Flooding

a. Population. Approximately 1.16 percent of the community's population is vulnerable.

b. Critical Facilities.

(1) Approximately 100 percent of the community's critical facilities is vulnerable.
(2) The specific critical facilities vulnerable in City of Yucaipa are:
All critical facilities in the community could be impacted by a significant flood.

c. Non-Critical Facilities.

(1) Approximately 100 percent of the community's Non-Critical Facilities are vulnerable.
(2) The specific Non-Critical Facilities vulnerable in City of Yucaipa are:
All non-critical facilities in the community could be impacted by a significant flood.

3. Landslide

a. Population. Approximately 0 percent of the community's population is vulnerable.

b. Critical Facilities.

(1) Approximately 0 percent of the community's critical facilities is vulnerable.
(2) The specific critical facilities vulnerable in City of Yucaipa are:
N/A

c. Non-Critical Facilities.

(1) Approximately 0 percent of the community's Non-Critical Facilities are vulnerable.
(2) The specific Non-Critical Facilities vulnerable in City of Yucaipa are:
N/A

4. Wildfires

a. Population. Approximately 0.72 percent of the community's population is vulnerable.

b. Critical Facilities.

(1) Approximately 100 percent of the community's critical facilities is vulnerable.
(2) The specific critical facilities vulnerable in City of Yucaipa are:
All critical facilities in the community could be impacted by a significant fire.

c. Non-Critical Facilities.

(1) Approximately 100 percent of the community's Non-Critical Facilities are vulnerable.
(2) The specific Non-Critical Facilities vulnerable in City of Yucaipa are: All non-critical facilities in the community could be impacted by a significant fire. Non-critical facilities at risk from wildfire include residential dwellings that abut the wildland areas.

Technology Hazards

1. Hazardous Materials

a. Population. Approximately 0 percent of the community's population is vulnerable.

b. Critical Facilities.

(1) Approximately 0 percent of the community's critical facilities is vulnerable.
(2) The specific critical facilities vulnerable in City of Yucaipa are:

Critical facilities may include permanent storage locations, roadways and various industrial and agricultural application sites.

c. Non-Critical Facilities.

(1) Approximately 0 percent of the community's Non-Critical Facilities are vulnerable.
(2) The specific Non-Critical Facilities vulnerable in City of Yucaipa are:
Non-critical facilities may include permanent storage locations, roadways and various industrial and agricultural application sites.

4.3.2 Potential Loss Estimation

4.3.2.1 Facility Replacement Cost Estimation

This section describes the replacement costs and economic impacts from lost facilities:

Oak Glen Road
High Traffic Areas
Facility Replacement Cost: $6656000
Estimated Economic Impact: $66560
Description of Economic Impact: Loss of this street would impact local businesses and require residents and emergency responders to find an alternate route to the area.

5th Street
High Traffic Areas
Facility Replacement Cost: $4044800
Estimated Economic Impact: $40488
Description of Economic Impact: Loss of this street would impact local businesses and require residents and emergency responders to find an alternate route to the area.

Bryant Street
High Traffic Areas
Facility Replacement Cost: $7372800
Estimated Economic Impact: $73728
Description of Economic Impact: Loss of this street would impact local businesses and require residents and emergency responders to find an alternate route to the area.

Avenue E
High Traffic Areas
Facility Replacement Cost: $6144000
Estimated Economic Impact: $61440
Description of Economic Impact: Loss of this street would impact local businesses and require residents and emergency responders to find an alternate route to the area.

Wildwood Canyon Road
High Traffic Areas
Facility Replacement Cost: $9216000
Estimated Economic Impact: $92160
Description of Economic Impact: Loss of this street would impact local businesses and require residents and emergency responders to find an alternate route to the area.

Colorado Street
High Traffic Areas
Facility Replacement Cost: $2150400
Estimated Economic Impact: $21504
Description of Economic Impact: Loss of this street would impact local businesses and require residents and emergency responders to find an alternate route to the area.

California Street
High Traffic Areas
Facility Replacement Cost: $3072000
Estimated Economic Impact: $30720
Description of Economic Impact: Loss of this street would impact local businesses and require residents and emergency responders to find an alternate route to the area.

Sand Canyon/14th Street
High Traffic Areas
Facility Replacement Cost: $3788800
Estimated Economic Impact: $37888
Description of Economic Impact: Loss of this street would impact local businesses and require residents and emergency responders to find an alternate route to the area.

Outer Highway So.
High Traffic Areas
Facility Replacement Cost: $2816000
Estimated Economic Impact: $28160
Description of Economic Impact: Loss of this street would impact local businesses and require residents and emergency responders to find an alternate route to the area.

Police Station
Police Stations
Facility Replacement Cost: $1500000
Estimated Economic Impact: $225000
Description of Economic Impact: Loss of this facility would impair the City's ability to respond to emergencies.

Yucaipa Station #551
Fire Stations
Facility Replacement Cost: $1800000
Estimated Economic Impact: $300000
Description of Economic Impact: Loss of this or both fire stations would severely impact our ability to respond to emergency calls, or at the least to respond in a timely manner.

Crafton Hills Station #552
Fire Stations
Facility Replacement Cost: $1600000
Estimated Economic Impact: $250000
Description of Economic Impact: Loss of this or both fire stations would severely impact our ability to respond to emergency calls, or at the least to respond in a timely manner.

City Hall
Government Facilities
Facility Replacement Cost: $6250000
Estimated Economic Impact: $937500
Description of Economic Impact: Loss of this facility would impair the ability to conduct City business and provide services to residents.

Public Works Yard
Government Facilities
Facility Replacement Cost: $200000
Estimated Economic Impact: $30000
Description of Economic Impact: Loss of this facility would impair the ability to conduct City business and provide services to residents.

Yucaipa Community Center
Government Facilities
Facility Replacement Cost: $4447000
Estimated Economic Impact: $667050
Description of Economic Impact: Loss of this facility would impact the ability to provide recreational opportunities to the community. This facility also serves as an American Red Cross Shelter in the event of an emergency.

Scherer Community Center
Government Facilities
Facility Replacement Cost: $3000000
Estimated Economic Impact: $450000
Description of Economic Impact: Loss of this facility would impact the ability to provide programs for the senior residents in our community.

Records Center
Government Facilities
Facility Replacement Cost: $160000
Estimated Economic Impact: $24000
Description of Economic Impact: Loss of this facility would impair the ability to conduct City business and provide services to residents.

Yucaipa Blvd. Bridge
Major Roads/Bridges
Facility Replacement Cost: $3000000
Estimated Economic Impact: $90000
Description of Economic Impact: Loss of this bridge would impact local businesses and require residents and emergency responders to find an alternate route to the area.

14th Street Bridge
Major Roads/Bridges
Facility Replacement Cost: $2025000
Estimated Economic Impact: $60750
Description of Economic Impact: Loss of this bridge would impact local businesses and require residents and emergency responders to find an alternate route to the area.

Bryant Street Bridge
Major Roads/Bridges
Facility Replacement Cost: $1113000
Estimated Economic Impact: $33390
Description of Economic Impact: Loss of this bridge would impact local businesses and require residents and emergency responders to find an alternate route to the area.

5th Street Bridge
Major Roads/Bridges
Facility Replacement Cost: $1500000
Estimated Economic Impact: $45000
Description of Economic Impact: Loss of this bridge would impact local businesses and require residents and emergency responders to find an alternate route to the area.

Avenue "E" Bridge
Major Roads/Bridges
Facility Replacement Cost: $1413454
Estimated Economic Impact: $42400
Description of Economic Impact: Loss of this bridge would impact local businesses and require residents and emergency responders to find an alternate route to the area.

Yucaipa Boulevard
Major Roads/Bridges
Facility Replacement Cost: $9820800
Estimated Economic Impact: $98208
Description of Economic Impact: Loss of this street would impact local businesses and require residents and emergency responders to find an alternate route to the area.

4.3.2.2 Individual Hazard Economic Loss Estimation

This section describes the potential losses due to each hazard confronting the community or jurisdiction:

Natural Hazards

1. Earthquake

Summary of Economic Losses

a. The economic loss resulting from this hazard is approximately $2,000,000
b. The loss from damage to structures from this hazard is approximately $450,000,000
c. The following is a description of the estimated losses:
Assuming a significant earthquake occurred along the San Andreas Fault, the majority of the City could be impacted significantly (including all critical and non-critical facilities/structures).

2. Flooding

Summary of Economic Losses

a. The economic loss resulting from this hazard is approximately $10,000,000
b. The loss from damage to structures from this hazard is approximately $20,000,000
c. The following is a description of the estimated losses:

Significant flooding is typically not on a City-wide basis that would damage all critical and non-critical facilities at the same time. Therefore, the estimated losses would take into account the potential loss of bridges.

3. Landslide

Summary of Economic Losses

a. The economic loss resulting from this hazard is approximately $0
b. The loss from damage to structures from this hazard is approximately $0
c. The following is a description of the estimated losses:
N/A

4. Wildfires

Summary of Economic Losses

a. The economic loss resulting from this hazard is approximately $10,000,000
b. The loss from damage to structures from this hazard is approximately $30,000,000
c. The following is a description of the estimated losses:
Loss of commercial tax revenue would be substantial. Commercial buildings would be an average loss of $1,500,000. Home/structure loss would be at an average of $250,000 per house.

Technology Hazards

1. Hazardous Materials

Summary of Economic Losses

a. The economic loss resulting from this hazard is approximately $0
b. The loss from damage to structures from this hazard is approximately $0
c. The following is a description of the estimated losses:

4.3.2.3 Individual Hazard Human Loss Estimation

Natural Hazards

1. Earthquake

Summary of Human Losses

a. The estimated number of fatalities resulting from this hazard is approximately 10
b. The estimated number of injuries resulting from this hazard is approximately 1500
c. The estimated number of displacees resulting from this hazard is approximately 1000
d. Total number of people affected: 2510
e. Percent of community's population at risk: 5.29%

2. Flooding

Summary of Human Losses

a. The estimated number of fatalities resulting from this hazard is approximately 0
b. The estimated number of injuries resulting from this hazard is approximately 50
c. The estimated number of displacees resulting from this hazard is approximately 500
d. Total number of people affected: 550
e. Percent of community's population at risk: 1.16%

3. Landslide

Summary of Human Losses

a. The estimated number of fatalities resulting from this hazard is approximately 0
b. The estimated number of injuries resulting from this hazard is approximately 0
c. The estimated number of displacees resulting from this hazard is approximately 0
d. Total number of people affected:
e. Percent of community's population at risk: 0%

4. Wildfires

Summary of Human Losses

a. The estimated number of fatalities resulting from this hazard is approximately 10
b. The estimated number of injuries resulting from this hazard is approximately 80
c. The estimated number of displacees resulting from this hazard is approximately 250
d. Total number of people affected: 340
e. Percent of community's population at risk: 0.72%

Technology Hazards

1. Hazardous Materials

Summary of Human Losses

a. The estimated number of fatalities resulting from this hazard is approximately 0
b. The estimated number of injuries resulting from this hazard is approximately 0
c. The estimated number of displacees resulting from this hazard is approximately 0
d. Total number of people affected:
e. Percent of community's population at risk: 0%

4.3.3 Analysis of Community Development Trends

4.3.3.1 Development History

This section describes the development history for City of Yucaipa.

Development History:

Prior to the appearance of European settlers, the Yucaipa Valley supported a substantial population of Serrano Indians who were members of the Shoshonean linguistic family. The name Yucaipa is taken from the Indian word "Yukaipat" which means "a wet place." It is believed that this word refers to a small lake once in existence in what is now the Dunlap Acres area. The Serrano lived in a village on the shore of this lake most of the year due to plentiful food and water supplies. They took occasional trips into the local mountains during acorn harvesting season. Remains of Serrano settlements have been studied by an archaeological team from the University of Redlands.

In the early 1800s, Franciscan missionaries from the San Gabriel Mission laid plans to utilize the general area as an agricultural training ground for newly- converted Indians. The secularization of mission property decreed by the Mexican government in 1833 brought this attempt to a halt. Spanish Dons competed with each other for this desirable valley, with the Lugo family winning over the claims of the Palomares. Diego Sepulveda, nephew of Don Antonio Maria Lugo, was assigned to the Yucaipa Valley section of the vast Lugo-owned "rancho de San Bernardino." In 1847, California passed from Mexican into American ownership. In 1852, the Lugo estate was sold to Mormon settlers

In 1857, the Mormons departed to return to Salt Lake City in response to the call of their President, Brigham Young, and Yucaipa Valley became the property of James Waters, and later of the Dunlaps.

By 1909 there were seven families living within the greater Yucaipa Valley area. Within a few years, many more families had moved into the Valley.

The Redlands-Yucaipa Land Company was a prime mover in the establishment and development of the community, which was named Yucaipa City. Yucaipa became known as "The Land of the Big Red Apple." Apples were a crop that had only a short life as it was soon discovered that the climate was too warm for them. Farmers discovered that the land was ideal for growing peaches and plums. These fruits became a thriving business in the Valley. Poultry raising also became a big business, and it was a $10 million-a-year enterprise for a time.

By the early 1950s, the population of the area had nearly doubled. A steady influx of people continues to the present time. The City of Yucaipa was incorporated on November 27, 1989.

4.3.3.2 Future Development:

The following General Plan goals for the Growth Management Element have been identified through a process of community review and were developed in conjunction with City staff, the General Plan Advisory Committee (GPAC), the Planning Commission and the City Council.

Goal GM-1: Ensure that future development proceeds at a pace consistent with the provision or acquisition of required infrastructure facilities and public services.

Goal GM-2: Ensure that the "Quality of Life" of City residents is not depreciated by future growth.

Goal GM-3: Adopt an incentive program to encourage projects that will infill existing urbanized areas.

The following General Plan goals for the Economic Development Element have been identified through a process of community review and were developed in conjunction with City staff, the General Plan Advisory Committee (GPAC), the Planning Commission and the City Council. The associated policies are designed to ensure that City revenues will be able to meet expenditures in order to provide a high level of services without a burdensome level of taxation.

Goal E-1: Encourage commercial growth that respects the market demand for commercial development in order to provide a positive economic climate for the City.

Goal E-2: Promote the redevelopment of commercial areas to enhance their economic viability in balance with the demands of commercial development.

Goal E-3: Promote additional transportation to downtown areas with increased bus service, better mass transit provisions and bicycle paths and trails.

Goal E-4: Capitalize on commercial and industrial opportunities along the 1-10 freeway in balance with the demands of commercial development.

Goal E-5: Encourage tourism by preserving and maintaining the distinctive qualities of Yucaipa.

Goal E-6: Ensure that future development provides jobs and economic growth for the citizens of Yucaipa.

This section presents goals, policies and objectives of the City as they relate to circulation and transportation. These statements incorporate items brought forth through a process of community review and were developed in conjunction with City staff, the GPAC, the Trails and Open Space Committee, the Planning Commission and the City Council.

Transportation Goals

Goal T-1: Develop a transportation system for current and future needs that moves people and goods safely and efficiently.

Goal T-2: Provide for a balance between different types of transportation.

Goal T-3: Prepare coordinated financial plans to upgrade the transportation system.

Goal T-4: Ensure appropriate legal and physical access to land prior to approving land divisions or new development.

Goal T-5: Strive to achieve minimum level of service "C" on all highways and intersections.

Goal T-6: Reduce dependency upon the automobile, and promote the use of public transit or increases in the average ridership when the automobile is utilized.

Goal T-7: Encourage non-motorized alternative transportation by creating bicycle lanes and pedestrian paths to commercial areas, parks and schools.

Goal T-8: Develop street design and site development standards that include provisions for emergency evacuation where appropriate.

Goal T-9: Develop Transportation Systems Management (TSM) plans for the community.

Trails and Paths Goals

Goal TP-1: Promote the development of safe and convenient bicycle and pedestrian corridors that provide alternative transportation routes to schools, parks and employment and commercial areas.

Scenic Highways Goals

Goal SH-1: Promote the appropriate and positive landscape treatment along scenic highways to provide the necessary buffering and screening, as well as to provide scenic openness by preserving visual access to natural scenic vistas and features.

4.4 Multi-Jurisdictional Risk Assessment

4.4 Multi-Jurisdictional Risk Assessment

Not Applicable

Section 5 – Mitigation Strategy

5.1 Community Capability Assessment

Storm Water Management Ordinances: Yes

Stream Management Ordinances: Yes

Zoning Management Ordinances: Yes

Subdivision Management Ordinances: Yes

Erosion Management Ordinances: Yes

Floodplain Management Ordinances: Yes

Floodplain Management Plan Published Date: 11/15/1993

Floodplain Management Last Delineation Date: 11/15/2003

Elevation Certificates Maintained: Yes

National Flood Insurance Program Community: Yes

National Flood Insurance Join Date:1/28/1991

NFPI Number: 060739

NFPI Rating: x

NFPI Rating Date: 1/17/1997

Land Use Plan: Yes

Land Use Plan Last Update: 9/13/2004

Community Zoned: Yes

Zoned Date: 9/13/2004

Established Building Codes: Yes

Building Codes Last Updated: 10/28/2002

Type of Building Codes: Uniform Building Code

Local Electric Utilities: Southern California Edison

Local Water Utilities: Yucaipa Valley Water District, South Mesa Water Company, Western Heights Water Company

Local Sewage Treatment Utilities: Yucaipa Valley Water District

Local Natural Gas Utilities: Gas Company

Local Telephone Utilities: Verizon

Fire Insurance Rating: ISO Rating 5

Fire Insurance Rating Date: 10/21/2002

Previous Mitigation Plans: Projects to Mitigate Flooding:

- Installed curb and gutter on Yucaipa Boulevard from 11th Street to 5th Street
- Installed Wilson Creek Channel from Potato Creek to Yucaipa Boulevard with 3 Street Crossings
- Installed Gateway Wash Channel

- Installed multiple Detention Basins at Chapman Heights Golf Course
- Installed Debris Basins at Chapman Heights
- Installed 10 Storm Drain Systems at Chapman Heights
- Installed Storm Drain on Yucaipa Boulevard
- Installed Bridge over Wilson Creek at Avenue E and 14th Street
- Installed Bridge over Wildwood Creek at Bryant Street
- Installed Detention Basin on Yucaipa Creek at 8th Street
- Installed Storm Drain at California and County Line Road

Projects to Mitigate Earthquake:

- Adoption and update of Uniform Building Code.

Projects to Mitigate Wildland Fire Threat:

- Adoption and update of Uniform Building Code and Fire Codes.

Flood Insurance Claims: Projects to Mitigate Flooding:

- Installed curb and gutter on Yucaipa Boulevard from 11th Street to 5th Street
- Installed Wilson Creek Channel from Potato Creek to Yucaipa Boulevard with 3 Street Crossings
- Installed Gateway Wash Channel
- Installed multiple Detention Basins at Chapman Heights Golf Course
- Installed Debris Basins at Chapman Heights
- Installed 10 Storm Drain Systems at Chapman Heights
- Installed Storm Drain on Yucaipa Boulevard
- Installed Bridge over Wilson Creek at Avenue E and 14th Street
- Installed Bridge over Wildwood Creek at Bryant Street
- Installed Detention Basin on Yucaipa Creek at 8th Street
- Installed Storm Drain at California and County Line Road

Projects to Mitigate Earthquake:

- Adoption and update of Uniform Building Code.

Projects to Mitigate Wildland Fire Threat:

- Adoption and update of Uniform Building Code and Fire Codes.

5.1.1 Existing Plans, Policies, and Ordinances

This section describes the existing plans, policies, and ordinances for City of Yucaipa.

Existing Community Plans/Documents:

The current General Plan was adopted September 1992. (Update in process)

Uniform Fire Codes

Uniform Building Codes

Master Plan of Drainage

Emergency Operations Plan

5.1.2 Prior Mitigation Actions and Projects

This section serves to identify the Previous Mitigation Plans, Projects and Actions:

Previous Mitigation Plans, Projects and Actions:

Projects to Mitigate Flooding:

- Installed curb and gutter on Yucaipa Boulevard from 11th Street to 5th Street
- Installed Wilson Creek Channel from Potato Creek to Yucaipa Boulevard with 3 Street Crossings
- Installed Gateway Wash Channel
- Installed multiple Detention Basins at Chapman Heights Golf Course
- Installed Debris Basins at Chapman Heights
- Installed 10 Storm Drain Systems at Chapman Heights
- Installed Storm Drain on Yucaipa Boulevard
- Installed Bridge over Wilson Creek at Avenue E and 14th Street
- Installed Bridge over Wildwood Creek at Bryant Street
- Installed Detention Basin on Yucaipa Creek at 8th Street
- Installed Storm Drain at California and County Line Road

Projects to Mitigate Earthquake:

- Adoption and update of Uniform Building Code.

Projects to Mitigate Wildland Fire Threat:

- Adoption and update of Uniform Building Code and Fire Codes.

5.1.2.1 Completed and On-Going Mitigation Projects

This section serves to identify the Completed and On-Going Projects in the community.

Misc. Culverts

Name: Various Locations
Description: Construct storm drains throughout City.
Alternatives: Do Nothing.
Strategy: CIP
Status: On-Going
Completion Date:
Local Priority: High
Hazards Mitigated:
1 . Flooding : 100%
Total Cost: 5310560
Calculated BC Ratio: 5.649122
Associated Files: No associated files.

Erosion Repairs

Name: Oak Glen Road at Wilson Creek
Description: Reconstruct existing facilities following storm event(s).

Alternatives: Do Nothing.
Strategy: CIP
Status: On-Going
Completion Date:
Local Priority: Medium
Hazards Mitigated:
1 . Flooding : 100%
Total Cost: 357700
Calculated BC Ratio: 83.86916
Associated Files: No associated files.

Erosion Repairs

Name: Yucaipa Creek at 5th Street
Description: Reconstruct existing facilities following storm event(s).
Alternatives: Do Nothing.
Strategy: CIP
Status: On-Going
Completion Date:
Local Priority: Medium
Hazards Mitigated:
1 . Flooding : 100%
Total Cost: 13797
Calculated BC Ratio: 2174.386
Associated Files: No associated files.

Erosion Repairs

Name: Yucaipa Creek at 6th Street
Description: Reconstruct existing facilities following storm event(s).
Alternatives: Do Nothing.
Strategy: CIP
Status: On-Going
Completion Date:
Local Priority: Medium
Hazards Mitigated:
1 . Flooding : 100%
Total Cost: 13797
Calculated BC Ratio: 2174.386
Associated Files: No associated files.

Erosion Repairs

Name: Yucaipa Creek at Ave. F
Description: Reconstruct existing facilities following storm event(s).Alternatives: Do Nothing.
Strategy: CIP
Status: On-Going
Completion Date:
Local Priority: Medium
Longitude:
Latitude:
Hazards Mitigated:

1 . Flooding : 100%
Total Cost: 204400
Calculated BC Ratio: 146.771
Associated Files: No associated files.

Erosion Repairs

Name: Yucaipa Creek at Nebraska St
Description: Reconstruct existing facilities following storm event(s).
Alternatives: Do Nothing.
Strategy: CIP
Status: On-Going
Completion Date:
Local Priority: Medium
Hazards Mitigated:
1 . Flooding : 100%
Total Cost: 398580
Calculated BC Ratio: 75.2672
Associated Files: No associated files.

Earthquake

Name: Building Code
Description: Adoption and update of Uniform Building Code.
Alternatives: Keep existing codes.
Strategy: Update as necessary.
Status: On-Going
Completion Date:
Local Priority: High
Hazards Mitigated:
1 . Wildfires : 20%
2 . Earthquake : 20%
Total Cost: 0
Calculated BC Ratio:
Associated Files: No associated files.

Erosion Repairs

Name: Chicken Springs Wash at Wilson
Description: Reconstruct existing facilities following storm event(s).
Alternatives: Do Nothing.
Strategy: CIP
Status: On-Going
Completion Date:
Local Priority: Medium
Hazards Mitigated:
1 . Flooding : 100%
Total Cost: 301490
Calculated BC Ratio: 99.50579
Associated Files: No associated files.

Erosion Repairs

Name: Wildwood Ck at Live Oak Canyon
Description: Reconstruct existing facilities following storm event(s).
Alternatives: Do Nothing.
Strategy: CIP
Status: On-Going
Completion Date:
Local Priority: Medium
Hazards Mitigated:
1 . Flooding : 100%
Total Cost: 429240
Calculated BC Ratio: 69.89097
Associated Files: No associated files.

Erosion Repairs

Name: Fremont Street at Gateway Wash
Description: Reconstruct existing facilities following storm event(s).
Alternatives: Do Nothing.
Strategy: CIP
Status: On-Going
Completion Date:
Local Priority: Medium
Hazards Mitigated:
1 . Flooding : 100%
Total Cost: 11651
Calculated BC Ratio: 2574.886
Associated Files: No associated files.

Erosion Repairs

Name: Chicken Springs Wash at 6th St
Description: Reconstruct existing facilities following storm event(s).
Alternatives: Do Nothing.
Strategy: CIP
Status: On-Going
Completion Date:
Local Priority: Medium
Hazards Mitigated:
1 . Flooding : 100%
Total Cost: 333172
Calculated BC Ratio: 90.04358
Associated Files: No associated files.

Erosion Repairs

Name: Chicken Springs Wash at 8th St
Description: Reconstruct existing facilities following storm event(s).
Alternatives: Do Nothing.
Strategy: CIP
Status: On-Going

Completion Date:
Local Priority: Medium
Hazards Mitigated:
1 . Flooding : 100%
Total Cost: 333172
Calculated BC Ratio: 90.04358
Associated Files: No associated files.

Erosion Repairs

Name: Chicken Springs Wash at 9th St
Description: Reconstruct existing facilities following storm event(s).
Alternatives: Do Nothing.
Strategy: CIP
Status: On-Going
Completion Date:
Local Priority: Medium
Hazards Mitigated:
1 . Flooding : 100%
Total Cost: 333172
Calculated BC Ratio: 90.04358
Associated Files: No associated files.

Erosion Repairs

Name: Wildwood Wash at Oak Mesa
Description: Reconstruct existing facilities following storm event(s).
Alternatives: Do Nothing.
Strategy: CIP
Status: On-Going
Completion Date:
Local Priority: Medium
Hazards Mitigated:
1 . Flooding : 100%
Total Cost: 298424
Calculated BC Ratio: 100.5281
Associated Files: No associated files.

Erosion Repairs

Name: Wildwood Ck at Wildwood Canyon
Description: Reconstruct existing facilities following storm event(s).
Alternatives: Do Nothing.
Strategy: CIP
Status: On-Going
Completion Date:
Local Priority: Medium
Hazards Mitigated:
1 . Flooding : 100%
Total Cost: 108332
Calculated BC Ratio: 276.9265
Associated Files: No associated files.

Fire Code Adoption

Name: Fire Code Adoption
Description: Review, revise and update the fire code Ordinance.
Alternatives: Keep existing codes.
Strategy: Remain up-to-date on current construction methods and materials, and include these new concepts in the adoption of the City's Fire Code Ordinance. Monitor and revise as necessary the methods of mitigating hazards from wildfires.
Status: On-Going
Completion Date:
Local Priority: High
Hazards Mitigated:
1 . Wildfires : 30%
Total Cost: 5000
Calculated BC Ratio: 2400
Associated Files: No associated files.

This section lists Completed and On-Going Projects in the community by hazard.

Natural Hazards

1 . Earthquake

The following table identifies "Completed and On-Going Projects" to mitigate the Earthquake hazard.

(Dollar Amounts in Thousands)

Project No.	Completion Date	B/C Ratio	Custom B/C Ratio	Percent Mitigation	Total Cost	Available Financing										Total Funding
						City/Town		County		State		Federal		Other		
						Amount	FY	Amount	FY	Amount	FY	Amount	FY	Amount	FY	
Earthquake		0.00	0.00	20	$0	$0		$0		$0		$0		$0		$0
Totals:					**$0**	**$0**		**$0**		**$0**		**$0**		**$0**		**$0**

2 . Flooding

The following table identifies "Completed and On-Going Projects" to mitigate the Flooding hazard.

(Dollar Amounts in Thousands)

Project No.	Completion Date	B/C Ratio	Custom B/C Ratio	Percent Mitigation	Total Cost	Available Financing										Total Funding
						City/Town		County		State		Federal		Other		
						Amount	FY	Amount	FY	Amount	FY	Amount	FY	Amount	FY	
Misc. Culverts		5.65	0.00	100	$5,311	$5,311		$0		$0		$0		$0		$5,311
Erosion Repairs		83.87	0.00	100	$358	$358		$0		$0		$0		$0		$358
Erosion Repairs		2,174.39	0.00	100	$14	$14		$0		$0		$0		$0		$14
Erosion Repairs		2,174.39	0.00	100	$14	$14		$0		$0		$0		$0		$14
Erosion Repairs		146.77	0.00	100	$204	$204		$0		$0		$0		$0		$204
Erosion Repairs		75.27	0.00	100	$399	$399		$0		$0		$0		$0		$399
Erosion Repairs		99.51	0.00	100	$301	$301		$0		$0		$0		$0		$301
Erosion Repairs		69.89	0.00	100	$429	$429		$0		$0		$0		$0		$429
Erosion Repairs		2,574.89	0.00	100	$12	$12		$0		$0		$0		$0		$12
Erosion Repairs		90.04	0.00	100	$333	$333		$0		$0		$0		$0		$333
Erosion Repairs		90.04	0.00	100	$333	$333		$0		$0		$0		$0		$333
Erosion Repairs		90.04	0.00	100	$333	$333		$0		$0		$0		$0		$333
Erosion Repairs		100.53	0.00	100	$298	$298		$0		$0		$0		$0		$298
Erosion Repairs		276.93	0.00	100	$108	$108		$0		$0		$0		$0		$108
Totals:					**$8,447**	**$8,447**		**$0**		**$0**		**$0**		**$0**		**$8,447**

3 . Landslide

The following table identifies "Completed and On-Going Projects" to mitigate the Landslide hazard.

No Mitigation Projects have been linked to this hazard.

4 . Wildfires

The following table identifies "Completed and On-Going Projects" to mitigate the Wildfires hazard.

(Dollar Amounts in Thousands)

Project No.	Completion Date	B/C Ratio	Custom B/C Ratio	Percent Mitigation	Total Cost	Available Financing										Total Funding
						City/Town		County		State		Federal		Other		
						Amount	FY	Amount	FY	Amount	FY	Amount	FY	Amount	FY	
Earthquake		0.00	0.00	20	$0	$0		$0		$0		$0		$0		$0
Fire Code Adoption		2,400.00	0.00	30	$5	$0		$0		$0		$0		$0		$0
Totals:					**$5**	**$0**		**$0**		**$0**		**$0**		**$0**		**$0**

Technology Hazards

1 . Hazardous Materials

The following table identifies "Completed and On-Going Projects" to mitigate the Hazardous Materials hazard.

No Mitigation Projects have been linked to this hazard.

5.1.3 Technical and Fiscal Resources

This section describes the technical and fiscal resources for City of Yucaipa.

Technical and Fiscal Resources:

Technical Resources:

The City of Yucaipa has a number of technical resources either in house or on a contract basis. They are distributed through several City departments. Each department contributed significant technical expertise to our Hazard Mitigation Planning effort.

The City of Yucaipa has access to and has utilized other technical resources in our Hazard Mitigation planning effort. The following resources were utilized:

- San Bernardino County Flood Control District
- San Bernardino County Office of Emergency Services
- State of California Office of Emergency Services

Financial Resources:

The City of Yucaipa has a General Fund Budget of $14,219,818 for FY 2004/05. The Redevelopment Agency has a budget of $235,261 for FY 2004/05. The combined Capital Improvement Program and Pavement Management Program for FY 2004/05 is $5,253,183.

Pre-Disaster Programs
The Pre-Disaster Mitigation Program (PDM), authorized by DMA 2000, can provide funding to states, communities, and tribes for cost-effective hazard mitigation planning activities that complement a

comprehensive mitigation program and reduce injuries, loss of life, and damage and destruction of property before a disaster strikes.

The Flood Mitigation Assistance Program (FMA) provides funding to assist states and communities in implementing measures to reduce or eliminate the long-term risk of flood damage to buildings, manufactured homes and other insurable structures. The three types of grants available through FMA are planning, project, and technical assistance grants. Only communities that participate in the National Flood Insurance Program (NFIP) can apply for project and technical assistance grants. Planning grants are to be used by states and communities to prepare flood mitigation plans, with a focus on repetitive loss properties.

Post-Disaster Program
The Stafford Act (Public Law 100-107, as amended) authorizes funding for all federal disaster-related assistance in place today.

The Hazard Mitigation Grant Program (HMGP), authorized by Section 404 of the Stafford Act, (provides grants to state, local, and tribal governments (up to 15% of the FEMA disaster fluids they receive) to implement long-term hazard mitigation measures after a major disaster declaration.

The Assistance to Individuals and Households Grant Program is authorized by Section 411 of the Stafford Act and authorizes grants to be used for mitigation measures to cover serious unmet, disaster-related real property losses.

The Public Assistance Program (PAP) is authorized under Section 406 of the Stafford Act. This program provides funding, following a disaster declaration, for the repair, restoration, or replacement of damaged facilities belonging to governments and to private nonprofit entities, and for other associated expenses, including emergency protective measures and debris removal. The program also funds mitigation measures related to the repair of damaged public facilities

5.2 Mitigation Goals

The following section provides an overview of the Mitigation Goals and Objectives:

1. Emergency Preparedness

Description:
Support and expand disaster response programs, and initiate a program for post-disaster planning.

Objectives:
Policies

A. The City shall encourage involvement in the emergency preparedness programs already in place in the region, as well as emergency preparedness education in the schools and in the media.
B. Establish comprehensive procedures for post-disaster planning in affected areas.
C. Because emergency preparedness is crucial to the protection of the public in case of disaster, the following actions shall be implemented:

Actions

1. Coordinate with the County Office of Emergency Services, and maintain and update the Emergency Preparedness Management Plan for use by the City to protect the citizens of Yucaipa.

2. Coordinate with public and private agencies, and initiate coordination in residential areas through Neighborhood Watch, homeowners associations and other neighborhood groups.
3. Provide for the needs of dependent and immobile populations in emergency response and recovery operations through identification and prioritization of rescue needs.
4. Require disaster plans and provisions in the design, location and management of all public facilities.
5. Plan, design and use public facilities according to the requirements of the Emergency Management Plan.
6. Assure adequate access routes to and from potential devastation areas as required by the Emergency Management Plan.

Because the City's ultimate post-disaster survival will depend not only on the effectiveness of hazard mitigation and disaster response programs, but also on how quickly and how well the City is rebuilt after a major disaster, the City shall initiate a program for post-disaster planning. All options, from redevelopment to opportunities for upgrading, shall be included. Such measures as revised street and traffic patterns, parking, architectural and landscape design, and general land use compatibility, as well as building code improvements, shall be addressed.

Actions

1. Establish a standing committee for disaster recovery to plan for a disaster by providing contingency planning for the rapid and effective reconstruction of affected areas. The committee shall include representatives of Planning, Engineering, Flood Control, Community Services and Building and Safety, as well as liaisons to the local utilities and any State and Federal redevelopment, housing and reconstruction programs.
2. Develop guidelines through the committee for the exercise of emergency authorities for such purposes as the following.

a. Rapid designation of redevelopment areas through pre-preparation of emergency ordinances
b. Possible revision of land use, circulation and parking requirements, and institution of other programs for improving the community environment
c. Adaptation and institution of special programs for disaster recovery
d. Funding of disaster recovery measures.
e. Moratoria on reconstruction in any high-hazard areas where damage could be repeated
f. Upgrading of the building code
g. Establishment of Geologic Hazard Abatement Districts, as appropriate
h. Designation of sites for temporary housing (e.g., travel trailers and pre-fabricated construction) of households made homeless in the disaster, in cooperation with the Disaster Housing Program of the Federal Emergency Management Agency.

(Source: Yucaipa General Plan)
Associated Files: No associated files.

2. Flooding Hazards

Description:
Continuously integrate new data on natural and manmade hazards into overlay mapping and the review of land use proposals and applications and the enforcement of development standards through the use of mapping overlays, policies and land use designations.

Objectives:
Because of the need for additional flood control measures in the City and the opportunity presented by existing floodway areas as open space for human recreation and wildlife use, the City shall initiate a

study for a revised Storm Drain Plan No. 5. This study shall include an investigation into the feasibility of combining flood control and open space use and a cost comparison with the existing plan.

Action
1. Based on the findings of the proposed flood control study, the City shall initiate an effort to fund the construction of a system approved by the City Council.

(Source: Yucaipa General Plan)
Associated Files: No associated files.

3. Flooding Hazards

Description:
Minimize the potential risks resulting from the exposure of City residents to manmade and natural hazards.

Objectives:
Because the City has entered into an agreement to participate in the National Flood Insurance Program (NFIP) which provides flood insurance within designated floodplains, the following actions shall be implemented by the City:

Actions

1. Floodway and Floodplain areas as identified by the Federal Emergency Management Agency (FEMA) on Flood Insurance Rate Maps and Flood Boundary Maps shall be designated as Floodway (FW) on the Land Use Maps and Floodplain Overlays on the Hazards Overlay Maps.
2. Designated floodway areas shall be preserved for non- structural uses through restrictions of the FW land use district.
3. All new development, including filling, grading and construction, proposed within designated floodplains shall require submission of a written assessment prepared by a qualified hydrologist or engineer, in accordance with the latest "San Bernardino County Hydrology Manual" and the various detention basin policies (see Policy X for this Goal, S-1) to determine whether the development will significantly increase flood hazard and to show that all new structures will be adequately protected. Development shall be conditioned on receiving approval of this assessment by the City Engineer.
4. All new construction in the Floodplain Overlay areas shall be required to be flood-proofed and shall be located and designed to allow unrestricted flow of floodwaters.
5. The Land Use Compatibility Chart for the 100-Year Flood Plains (Table X-5) shall apply when reviewing all discretionary and ministerial actions in the designated floodplain.
6. Lands within floodplain areas may be developed with non- critical and non-essential uses if mitigation measures are incorporated so as to ensure that the proposed development will not be hazardous, increase flood depths or velocities downstream, or degrade water quality.
7. Known flood hazard information shall be provided with every discretionary ministerial action application.
8. When no mapped data exists, existing topographical, watershed, and drainage course data shall be evaluated for a determination of potential flood hazard for every discretionary and ministerial action.

Because the FEMA mapping and studies do not yet identify all flood hazard areas in the entire City, the following shall actions shall be implemented:

Actions

1. As new overflow studies and mapping are completed and approved by either the City Engineer or the San Bernardino County Flood Control District, they shall supplement the FEMA mapping and shall be incorporated into Flood Hazard Overlay mapping.
2. Programs for the continuous elevation and designation of floodway, floodplain and drainage areas shall be initiated and financed.
3. Timely application for FEMA mapping changes shall be initiated to reflect any additions to or alterations in identified Floodways or Floodplains by the City's Floodplain Management Administrator.
4. The siting of residential and other types of development requiring substantial structures shall be prohibited on playas or dry lake beds as shown on the Floodplain Overlay Map. Industrial, commercial, recreational, or transportation and other uses which utilize the playa or dry lake as a resource may be permitted.
5. All City areas shall be continuously evaluated through the application of development conditions in the pre- construction flood hazard inspection process.
6. Site studies shall be performed in areas where development is proposed which have been tentatively identified as subject to flooding.
7. Construction shall take place in compliance with study recommendations as described in site study required under action item #6 above.

Because dam failure as a result of earthquake or other causes results in severe risk to downstream properties, the City shall implement the following actions:

Actions

1. Require an engineering geology report for all new or proposed public and private reservoirs. This report shall be completed by a registered engineering geologist, conform to City standards, and be approved by the City Engineer.
2. Include reservoirs as Dam Inundation areas on the Hazard Overlay Map as required by the State of California.
3. Prohibit new dams and reservoirs in areas designated as Geologic Hazards on the Hazard Overlay Map.
4. Seek elimination of potentially hazardous dams and reservoirs.
5. Initiate programs to increase the earthquake resistance of dams and reduce the potential impacts of seismically- induced dam failures.
6. Prohibit critical, essential and high-risk land uses from Dam Inundation areas as shown on the Hazard Overlay Map and Table X-5.

Because substantial development has already occurred in floodways and floodplains, the City shall implement the following actions:

Actions

1. Continue to identify natural drainage courses and designate City of Yucaipa Drainage Easements as a means to preserve natural drainage flow paths and/or constructed drainage facilities.
2. Require identification, improvement and upgrading of critical facilities in flood hazard areas through such measures as anchorage to prevent flotation, water tight barriers over openings, reinforcement of walls to resist water pressures, use of materials to reduce wall seepage and installation of pumping facilities for internal and subsurface drainage.
3. Require implementation of flood protection measures when any additions to the original structure are proposed.
4. Establish funding mechanisms when flood control facilities are warranted.

Because drainage from adjacent development contributes to fire hazards, the following actions shall be implemented:

Actions

1. The run-off provisions of the Erosion and Sediment Control Ordinance shall apply City-wide.
2. Surface run-off from new development shall be controlled by on-site measures including but not limited to the following.

    a. Structural controls
    b. Restrictions regarding changes in topography, removal of vegetation, creation of impervious surfaces, and periods of construction such that the need for off-site flood and drainage control improvements is minimized and such that run-off from the development will not result in downstream flood hazards

Because public education plays a vital role in minimizing flood hazards, the City shall implement the following actions:

Actions

1. Establish a public information system through the Office of Emergency Services outlining emergency operations plans and measures to reduce personal losses in the event of a flood disaster.
2. Develop a flood warning system, where possible, through the County Flood Control District.
3. Develop dam failure and flood plain inundation evacuation plans through the County Office of Emergency Services.

Because flood protection is both local and regional in nature, the City shall implement the following actions:

Actions

1. Continue the development of intergovernmental coordination with cities, adjacent counties, the Army Corps of Engineers, and other agencies which have an interest in flood control projects that cross-jurisdictional boundaries.
2. Coordinate land use and flood control planning through staff contacts between the County Flood Control District, Special Districts and cities within the County, and through the annual review of the Capital Improvements Program.

Because the funding of necessary flood control and drainage facilities is a major concern, the City shall coordinate with the County in the preparation of local area drainage plans and establish funding mechanisms to provide the backbone drainage system for watershed areas within and affecting the City.

Because the proliferation of private detention basins is not desirable, safe or economical, the following policies and criteria shall be supported by the City:

San Bernardino County Detention Basin Policy
San Bernardino County Detention Basin Maintenance Financing Policy
San Bernardino County Detention Basin Submittal Procedures
Detention Basin Design Criteria for San Bernardino County

(Source: Yucaipa General Plan)
Associated Files: No associated files.

4. Seismic Hazards

Description:
Continuously integrate new data on natural and manmade hazards into overlay mapping and the review of land use proposals and applications and the enforcement of development standards through the use of mapping overlays, policies and land use designations.

Objectives:
Because strong technical input is needed to refine, enlarge and improve the knowledge of geologic hazards in Yucaipa, the City shall implement the following actions.

Actions

1. Establish a geotechnical information collection, storage and retrieval system. Coordinate with the Countywide information gathering effort, and ensure that the City's system will accomplish the following tasks.

    a. Solicit and coordinate geological studies by the United States Geological Survey (USGS), the California Division of Mines and Geology (DMG), the County and other local agencies, and make the resultant data available to the public and other agencies.
    b. Incorporate all new research for the prediction and mitigation of geologic hazards.
    c. File and coordinate with the County Geologist.
    d. Maintain clear and comprehensive mapping of all geological hazards.

2. Utilize the County Geologist, the Geotechnical Advisory Committee or professional consultants to establish criteria, standards, guidelines and format for required geologic reports, and formulate standardized mitigation measures. A professional Geologist shall review and approve all required geologic reports.
3. Incorporate newly acquired data and technology into the mapping, policies and procedures of this General Plan.

Because of the potential for liquefaction impacts to certain areas in the City, an inventory and analysis of such areas with liquefaction potential shall be undertaken.

Because of the potential relationship between seismic activity and landsliding effects, the City shall require that a seismic analysis be included as a part of landslide stability studies when required by the City Engineer.

Because individual developments may be subject to spot flooding from all streams or unmapped areas adjacent to mapped flood areas, the City shall require specific hydrology and hydraulic studies to be prepared at the time developments are proposed, as follows.

Actions

1. Identify existing drainage conditions, upstream and downstream drainage conditions at build out of the General Plan, and measures which must be taken within the development project or downstream from the project to preclude impacts on the proposed development or increased impacts to downstream development. These studies should be submitted and reviewed by the Engineering Department.
2. Fully account for all planned flood-control facilities within or adjacent to the project site. Where sections of flood-control facilities cannot be constructed, provision should be made for their ultimate construction, that is, right-of-way reserved and construction funds secured. Additionally, interim facilities must be provided which will be able to handle the additional runoff from the proposed

development until the planned flood control facilities are constructed.

(Source: Yucaipa General Plan)
Associated Files: No associated files.

5. Seismic Hazards

Description:
Minimize the potential risks resulting from the exposure of City residents to manmade and natural hazards.

Objectives:
Because the risks from many geologic hazards can be successfully mitigated through a combination of engineering, construction, land use and developmental standards, the City shall implement the following actions:

1. Require the formation of geologic hazard abatement districts as authorized by Public Resources Code Section 26500 et seq. where existing or proposed development is threatened by such hazards, and prevention, mitigation, abatement or control of a geologic hazard is deemed feasible.
2. Require sites to be developed and all structures designed in accordance with recommendations contained in any required geotechnical or geologic reports, through conditions, construction plans and field inspections.
3. Require that all recommended mitigation measures be clearly indicated and described on all grading and construction plans.
4. Require that clearances around structures and road widths in geologic hazard areas, as shown on the Hazard Overlay Map, meet the requirements found in Policy Y, Action 1 for this Goal, S-1.
5. Require all facilities to meet appropriate geologic hazard specifications as determined by the City Engineer for discretionary and ministerial authorizations.

Because increased public awareness of geologic hazards can reduce the risk of those hazards, the City shall implement the following actions:

Actions

1. Develop a geologic educational program for use by schools, developers and the public at large, covering hazards, abatements, and emergency plans and procedures as part of the City's Emergency Preparedness Management Plan.
2. Make geotechnical data and mapping readily available to the public through the County-wide Geotechnical Information System coordinated by the County Geologist as described in Policy C for Goal S-2.

Because the County is traversed by many major active faults resulting in a relatively high level of risk, the City shall implement the following actions:

Actions

1. Adopt all future upgrading of the seismic design section of the Uniform Building Code.
2. Require new structures and facilities to be designed and constructed to meet seismic safety and related design requirements of the most recent Uniform Building Code, or more stringent requirements if indicated by site investigations.
3. Require all new critical, essential or high occupancy facilities to be designed and operated in such a manner as to remain standing and functional during and after a disaster as determined by the Division of Building and Safety.

Because of the potential for displacement along faults not classified as active, the City shall reserve the right to require site-specific geotechnical analysis and mitigation for development located contiguous to potentially active faults, if deemed necessary by the City Engineer.

Because many structures were built prior to both 1933 and 1971 seismic standards, they are considered unlikely to withstand a seismic event of the predicted intensity. The City shall undertake studies and develop programs to minimize the risk of potential seismic disaster in areas where inadequate structures exist in the following ways:

Actions

1. Initiate a structural hazards identification and abatement program through the Division of Building and Safety, with priority given to the identification and abatement of hazards in critical, essential and high occupancy structures, in structures located within areas of severe geologic hazard and in structures built prior to the enactment of applicable local or state earthquake design standards. This program shall be in accordance with SB 547, enacted in Chapter 250, statutes of 1986, requiring local jurisdictions to develop structural hazard reduction programs for such buildings by January 1, 1990.
2. Require periodic inspection by the Office of Building and Safety of all critical, essential and high occupancy buildings to identify potential hazards in the event of a major earthquake. When hazards are identified, require mitigation by the owner.
3. Bring all existing critical, essential, and high occupancy structures found to be hazardous into conformance with applicable seismic and related safety (fire, toxic materials storage and uses, etc.) standards through rehabilitation, reconstruction, demolition, reduction of occupancy levels, or change in use.
4. Require rehabilitation of private unfit structures through implementation of the Uniform Building Code and Hazardous Building Ordinance. Priorities for critical, essential or high occupancy buildings shall be based on hazard to life, type of occupancy, method of construction, physical condition and location.
5. Require the upgrading of buildings and facilities to achieve compliance with the latest earthquake standards as a condition of granting building permits for major additions and repairs.
6. Establish and administer incentives for seismic retrofitting, including but not limited to the following.

   a. Area-wide revitalization programs
   b. Community Development Block Grants
   c. US Small Business Administration loans
   d. Public Purpose Bonds
   e. Marks History Bonds
   f. Local-General Funds
   g. Local-General Obligation Bonds
   h. Making seismic safety a major factor in selecting future areas for redevelopment
   i. Tax reductions for building rehabilitation to minimize personal economic costs
   j. Providing relocation assistance to persons and businesses temporarily or permanently dislocated from hazardous old buildings
   k. Requesting Federal and/or State financial assistance to implement corrective measures

7. Support regional or statewide programs providing funding or technical assistance to local governments to allow accurate identification of existing structural hazards in private development and providing assistance to public and private sectors to facilitate and to minimize the social and economic costs of abatement.

Because many structures with important functions and potentially severe consequences of failure do not fall under City control (i.e., dams, utility installations, transportation structures) the City shall implement the following actions:

Actions

1. Continue to work with public utilities, school districts, the State Department of Transportation (CalTrans) and other agencies supplying critical public services to ensure that they have incorporated structural safety and other measures to be adequately protected from seismic hazards for both existing and proposed facilities.
2. Encourage CalTrans and all utilities to review all their facilities within the City to assess potential impacts of seismic hazards; comments based on this review should be forwarded to the City.
3. Encourage utility companies to institute orderly programs of installing cut-off devices on utility lines, starting with the lines that appear to be most vulnerable and those which serve the most people. Adequate emergency water supplies shall be established and maintained in areas dependent upon water lines which cross active fault zones.

Because the ground in close proximity to a fault is subject to rupture during an earthquake, exposing occupants and structures to high levels of risk, those areas identified by the Alquist/Priolo Special Studies Zone Act (Public Resources Code, Division 2, Chapter 7.5) shall be designated on the Hazards Overlay Map, and the following actions shall be implemented:

Actions

1. Apply definitions, provisions and mapping of the Alquist/Priolo Special Studies Zone Act.
2. Apply the Land Use Compatibility Chart for Special Studies Zones when reviewing all discretionary and ministerial actions (Table X-2).
3. Maintain a minimum 50-foot setback from an identified fault for all new structures. For an inferred fault area, a 250-foot setback shall be maintained. However, critical, essential or high occupancy structures and facilities shall not be located in Special Studies Zones unless there is no feasible alternative, as determined by staff review, in which case these facilities shall maintain a 150-foot setback from an identified fault. (A 200-foot setback shall be maintained if the fault is inferred.)
4. Withhold public financing from buildings within the Studies Zone where there is a confirmed fault trace unless it can be established that there is no potential for surface fault displacement or ground rupture which would injure the public investment or fulfillment of its purpose.
5. Do not create new lots within the Studies Zone unless an appropriate geologic investigation establishes sufficient and suitable land area for development according to existing zoning and other applicable City ordinances.
6. Plan transportation facilities (i.e., roads, freeways, rail, rapid transit) and utility systems to cross active fault traces a minimum number of times and to be designed to accommodate fault displacement without major damage that would cause long term and unacceptable disruption of service. Utility lines shall be equipped with such mechanisms as flexible units, valving, redundant lines or auto valves to shut off flows in the event of fault rupture.

Because the purpose of the Alquist/Priolo Special Studies Zone Act is only applicable to fault rupture areas (in close proximity to faults) and because the entire San Bernardino Valley area is subject to severe hazard from the effects of shaking due to an earthquake, the City shall implement the following actions:

Actions

1. Require special studies, including dynamic analysis for all major structures (critical, essential and high occupancy land uses) within areas determined by the City Engineer to be subject to significant seismic shaking.
2. Design and construct all structures in areas determined by the City Engineer to be subject to significant seismic shaking to withstand ground shaking forces of a minor earthquake without damage, of a moderate earthquake without structural damage, and of a major earthquake without collapse.

Critical, essential, and high occupancy structures shall be designed and constructed to remain standing and functional following a major earthquake and shall be so engineered as to withstand maximum probable ground motion accelerations.
3. Require all new construction to meet the most current and applicable lateral force requirements.
4. Strengthen earthquake resistance standards for non- structural components of structures including exterior veneers, internal partitions, lighting fixtures, elevators and equipment.

Because liquefaction can cause devastating structural damage and because there is a high potential for saturation when the groundwater level is within the upper 50 feet of alluvial material, the City shall implement the following actions:

Actions

1. Require that each site located within the Liquefaction Hazard Overlay shall be evaluated by a licensed geologist prior to design, land disturbance or construction for soil type, history of the water table's fluctuation and adequacy of the structural engineering to withstand the effects of liquefaction.
2. Apply the Land Use Compatibility Chart for Liquefaction Areas (Table X-3) when reviewing all discretionary and ministerial actions.

Because portions of the City have moderate landslide potential, posing measurable risk to life and property, and because once landslides are recognized, many can be safely mitigated, the City shall implement the following actions:

Actions

1. Require that a stability analysis be required in Landslide Hazard areas designated "Generally Susceptible" and "Mostly Susceptible" on the Hazards Overlay Maps and where required by the Geologist.
2. Require site development and construction in compliance with soil and geologic investigation report recommendations.
3. Apply the Land Use Compatibility Chart for Landslides (Table X-4) when reviewing all discretionary and ministerial actions.
4. Fund and prepare a land use plan that is in conformance with the Land Use Compatibility Chart for landslides in designated high landslide hazard areas as they are identified.
5. Restrict avoidable alteration of the land which is likely to increase the hazard within areas of demonstrated or potential landslide hazard, including concentrations of water through drainage or septic systems, removal of vegetative cover, steepening of slopes and undercutting the base of a slope.
6. Restrict grading to minimal amounts necessary to provide access, and require grading permits to have an approved site plan which minimizes grading and conforms to the recommendations of any required geologic investigation.
7. Require development on hillsides to be sited in the least obtrusive fashion, thereby minimizing the extent of topographic alteration required.
8. Restrict development in areas of known landslides or landslide-prone deposits on steep slopes, except where engineering and geologic site investigations indicate such sites are stable or can be made stable by the application of appropriate mitigating measures. In such cases, it must be shown to the satisfaction of the City that the risk to persons, property and public liability can be reduced to an acceptable degree.
9. Require that foundation and earth work be supervised and certified by a geotechnical engineer and, where deemed necessary, an engineering geologist, in projects where evaluations indicate that state-of-the-art measures can correct instability.

10. The City shall generate ma-specific (where appropriate) hillside development plans on the basis of baseline inventory and geotechnical analysis related to landsliding potential.

Because of limited specific information on the extent of subsidence in the City, the City shall implement the following actions:

Actions

1. Undertake a program of subsidence hazard identification that will outline the extent of the hazard in the City and propose mitigation measures through the office of the City Engineer.
2. Restrict the construction of any facility which is needed for public safety or for the provision of needed emergency services where an interruption in service could result from structural failure due to settlement or subsidence unless the only alternative sites would be so distant as to thereby jeopardize the safety of the community served.
3. Require that all site-specific geotechnical investigations conducted for proposed development include an assessment of potential impacts and mitigation measures related to expansive reactive soils and erosion.

(Source: Yucaipa General Plan)
Associated Files: No associated files.

6. Wildland Fire Hazard

Description:
Support and expand disaster response programs, and initiate a program for post-disaster planning.

Objectives:
Because an integrated approach is needed to coordinate the City's present and future needs in fire protection services in response to fire hazards and risks and to serve as a basis for program budgeting, identification and implementation of optimum cost- effective solutions, the City shall implement the following actions.

Actions

1. Participate in the creation of a County-Wide Fire Protection Master Plan based upon land use districts.
2. Develop, adopt, and implement a recommended schedule of fees to finance the fire protection infrastructure that is tied to land use categories and specific community needs as prescribed by the County-Wide Fire Protection Master Plan.
3. Continue to coordinate fire protection services for the City, with the County, the California Department of Forestry and Fire Protection, the United States Forest Service, the Bureau of Land Management, and all City and special districts with fire protection powers.
4. Require development applicants, in areas of identified fire risk, to prepare a site-specific fire protection plan.
5. Require applicants to fund expansion of local fire protection services by payment of appropriate impact fees.
6. Implement monitoring of fire-prevention measures (such as fuels reduction) to prevent damage to biological habitats in chaparral areas.

(Source: Yucaipa General Plan)
Associated Files: No associated files.

7. Wildland Fire Hazards

Description:
Minimize the potential risks resulting from the exposure of City residents to manmade and natural hazards.

Objectives:
Because rapid urban development has resulted in potential fire hazards in wildland/urban intermix areas County-wide, the City shall implement the following actions:

Actions

1. Apply the regulations of the "Greenbelt" Fire Safety Overlay Ordinance as found in the Development Code to all City areas subject to wildland/urban intermix fire hazards; the provisions of the Hillside and Foothill Hazard Overlay Ordinances as found in the Development Code shall be incorporated into the Fire Hazard Overlay, insuring the following.

a. High fire hazard development shall incorporate careful site design, use of fire retardant building materials and landscaping, development and maintenance of fuel breaks and vegetation management programs, and provisions to limit public access to open space areas in order to minimize wildland fire hazard.
b. Adequate and reliable water storage for community fire protection in hazardous areas shall be provided.
c. Multiple access with minimum road design standards is required.
d. Clearances around structures and road widths in fire and geologic hazard areas as identified on the Hazard Overlay Map should generally meet the following requirements.

i. New structures proposed on parcels of sufficient width (usually 60 feet or greater) should maintain a minimum 30-foot wide building separation.
ii. All structures should maintain a minimum 30-foot wide vegetation clearance area with certain limited exceptions for ornamental landscaping, as recommended by the local fire authority.
iii. Public roadways should be developed with a minimum 50-foot wide right-of-way, with a minimum 26-foot wide paved way of travel. For privately maintained roads, the minimum should generally be no less than a 24-foot wide paving with no parking allowed, 32-foot paving with parking allowed on one side, or a 36-foot wide paving with parking allowed on both sides.

e. Require incorporation of High Fire Hazard Area criteria in the review of proposed General Plan amendments and in the development of Specific Plans.

2. Identify and map all such areas on a continuous basis, amending Hazard Overlay Maps where needed.
3. Evaluate the Fire Hazard Overlay Ordinance regularly and revise when necessary to reflect the most current fire-safe building and development techniques and standards.

Because public education is a vital part of fire hazard abatement, prevention and mitigation, the City shall implement the following actions:

Actions

1. Continue to support existing CDF education programs in the areas of vegetation modification and management, fire-safe site design techniques and fire prevention, including smoke detector distribution, Exterior Hazard Inspection Programs Fire Safety Team Teaching and the Forest Protection Program.
2. Continue to disseminate an informational brochure on design and construction standards required in the Fire Hazard Overlay through the Division of Building and Safety.

Because fire exists as a hazard Citywide, the following requirements shall apply City-wide unless superseded by the more stringent requirements of the Fire Hazard Overlay:

Actions

1. The Peakload Water Supply System guidelines contained in Table X-1 shall be met for all new development or be adequately served by water supplies for domestic use and community fire protection in accordance with standards as determined by the City and the local fire protection agency or authority.
2. Provide adequate fire protection facilities and services in accordance with standards of the City and the local fire protection agency or authority for all development, existing and proposed.
3. Require structures, features of structures or activities determined to be hazardous in terms of fire potential to be brought into conformance with current applicable fire and safety standards.
4. Limit or prohibit development or activities in areas lacking water and fire fighting facilities.
5. Approve high intensity uses such as theaters, motels, restaurants, and schools, and uses requiring the handling or storage of large amounts of flammable materials only in areas with year-round fire protection and adequate water systems with hydrants.
6. Continue to evaluate and amend as necessary development standards for location, building separations, structural design and detection hardware.
7. Require adequate visible designation of all streets, roads and buildings, to the standards of the City Fire Warden or the local fire protection agency or authority.
8. Plumb all new swimming pools and static water sources to allow connection to fire fighting equipment if requested by the City Fire Warden or the local fire protection agency or authority.
9. The City shall ensure that successive uses of individual buildings comply with appropriate building and fire standards.
10. Known fire hazard information shall be included in the application for every discretionary or ministerial action.
11. Adopt common standards for rue safety and building construction.

Because developments can add to the wind hazard due to increased dust, the removal of windbreaks, and other factors, the City shall require developments subject to discretionary permits in areas identified as susceptible to wind hazards to address site-specific analysis of the following:

Grading restrictions and/or controls on the basis of soil types, topography or season
Landscaping methods, plant varieties, and revegetation scheduling to achieve optimal revegetation success
Dust-control measures during grading, trucking, and other dust-generating activities

Because erosion control is an important concern of the property owner and because many areas in the City are highly susceptible to erosion, the City shall implement the following actions:

Actions

1. Apply the provisions of the adopted Erosion and Sediment Control Ordinance City-wide.
2. Regulate grading, land clearance and grazing in susceptible areas to prevent erosion.
3. Establish an education program for homeowners, emphasizing land use for erosion control; coordinate this program with the Soil Conservation Service.
4. Restrict the use of off-road vehicles in areas susceptible to erosion.

(Source: Yucaipa General Plan)
Associated Files: No associated files.

8. Wildland Fire Hazards

Description:
Continuously integrate new data on natural and manmade hazards into overlay mapping and the review of land use proposals and applications and the enforcement of development standards through the use of mapping overlays, policies and land use designations.

Objectives:
The City shall require, where appropriate, the use of fire safety features in newly-proposed developments which will balance fire protection services with the potential need. These measures may include, but shall not be limited to, measures specified in the Fire Safety Review Area I and II Development Requirements.

(Source: Yucaipa General Plan)
Associated Files: No associated files.

5.3 Mitigation Actions/Projects

5.3 Mitigation Actions/Projects

This section serves to identify proposed projects in the community.

Drainage Facilities

Name: Wilson Creek
Description: Install bridges, channel improvements.
Alternatives: Do Nothing.
Strategy: CIP
Status: Proposed
Completion Date:
Local Priority: High
Hazards Mitigated:
1 . Flooding : 100%
Total Cost: 41305926
Calculated BC Ratio: 0.726288
Associated Files: No associated files.

Drainage Facilities

Name: Wildwood Creek
Description: Install bridges, channel improvements.
Alternatives: Do Nothing.
Strategy: CIP
Status: Proposed
Completion Date:
Local Priority: High
Hazards Mitigated:
1 . Flooding : 100%
Total Cost: 44555659
Calculated BC Ratio: 0.6733152
Associated Files: No associated files.

Drainage Facilities

Name: Chicken Springs Wash
Description: Channel improvements.
Alternatives: Do Nothing.
Strategy: CIP
Status: Proposed
Completion Date:
Local Priority: High
Hazards Mitigated:
1 . Flooding : 100%
Total Cost: 6405209
Calculated BC Ratio: 4.683688
Associated Files: No associated files.

Drainage Facilities

Name: County Line Drain
Description: Install storm drain.
Alternatives: Do Nothing.
Strategy: CIP
Status: Proposed
Completion Date:
Local Priority: High
Hazards Mitigated:
1 . Flooding : 100%
Total Cost: 1666321
Calculated BC Ratio: 18.00373
Associated Files: No associated files.

Detention Basins

Name: Wildwood Basin
Description: Construct detention basin.
Alternatives: Do Nothing.
Strategy: CIP
Status: Proposed

Completion Date:
Local Priority: Critical
Hazards Mitigated:
1 . Flooding : 100%
Total Cost: 5518150
Calculated BC Ratio: 5.436604
Associated Files: No associated files.

Fire Facilities

Name: Land Acquisition & Site Improvements
Description: Land acquisition and site improvements (2 acres).
Alternatives: N/A
Strategy: CIP
Status: Proposed
Completion Date:
Local Priority: High
Hazards Mitigated:
1 . Wildfires : 100%
Total Cost: 612000
Calculated BC Ratio: 65.35947
Associated Files: No associated files.

Fire Facilities

Name: Fire Engine and Equipment
Description: Acquisition of fire engines (4) and equipment.
Alternatives: N/A
Strategy: CIP
Status: Proposed
Completion Date:
Local Priority: High
Hazards Mitigated:
1 . Wildfires : 100%
Total Cost: 1260000
Calculated BC Ratio: 31.74603
Associated Files: No associated files.

Fire Facilities

Name: Facilities Construction
Description: Facilities construction (2 stations).
Alternatives: N/A
Strategy: CIP
Status: Proposed
Completion Date:
Local Priority: High
Hazards Mitigated:
1 . Wildfires : 100%
Total Cost: 3434000
Calculated BC Ratio: 11.64822
Associated Files: No associated files.

Drainage Facilities

Name: Yucaipa Creek
Description: Channel improvements.
Alternatives: Do Nothing.
Strategy: CIP
Status: Proposed
Completion Date:
Local Priority: High
Hazards Mitigated:
1 . Flooding : 100%
Total Cost: 1179129
Calculated BC Ratio: 25.44251
Associated Files: No associated files.

Drainage Facilities

Name: Dunlap Channel
Description: Channel widening.
Alternatives: Do Nothing.
Strategy: CIP
Status: Proposed
Completion Date:
Local Priority: High
Hazards Mitigated:
1 . Flooding : 100%
Total Cost: 12463327
Calculated BC Ratio: 2.407062
Associated Files: No associated files.

Detention Basins

Name: Wilson Creek Basin
Description: Construct detention basin.
Alternatives: Do Nothing.
Strategy: CIP
Status: Proposed
Completion Date:
Local Priority: Critical
Longitude:
Latitude:
Hazards Mitigated:
1 . Flooding : 100%
Total Cost: 5865114
Calculated BC Ratio: 5.11499
Associated Files: No associated files.

This section serves to identify the proposed projects in the community by hazard.

Natural Hazards

1 . Earthquake

The following table identifies "Proposed Projects" to mitigate the Earthquake hazard.

No Mitigation Projects have been linked to this hazard.

2 . Flooding

The following table identifies "Proposed Projects" to mitigate the Flooding hazard.

(Dollar Amounts in Thousands)

Project No.	Completion Date	B/C Ratio	Custom B/C Ratio	Percent Mitigation	Total Cost	Available Financing										Total Funding
						City/Town		County		State		Federal		Other		
						Amount	FY	Amount	FY	Amount	FY	Amount	FY	Amount	FY	
Drainage Facilities		0.73	0.00	100	$41,306	$41,306		$0		$0		$0		$0		$41,306
Drainage Facilities		0.67	0.00	100	$44,556	$44,556		$0		$0		$0		$0		$44,556
Drainage Facilities		4.68	0.00	100	$6,405	$6,405		$0		$0		$0		$0		$6,405
Drainage Facilities		18.00	0.00	100	$1,666	$1,666		$0		$0		$0		$0		$1,666
Detention Basins		5.44	0.00	100	$5,518	$5,518		$0		$0		$0		$0		$5,518
Drainage Facilities		25.44	0.00	100	$1,179	$1,179		$0		$0		$0		$0		$1,179
Drainage Facilities		2.41	0.00	100	$12,463	$12,463		$0		$0		$0		$0		$12,463
Detention Basins		5.11	0.00	100	$5,865	$5,865		$0		$0		$0		$0		$5,865
Totals:					**$118,959**	**$118,959**		**$0**		**$0**		**$0**		**$0**		**$118,959**

3 . Landslide

The following table identifies "Proposed Projects" to mitigate the Landslide hazard.

No Mitigation Projects have been linked to this hazard.

4 . Wildfires

The following table identifies "Proposed Projects" to mitigate the Wildfires hazard.

(Dollar Amounts in Thousands)

Project No.	Completion Date	B/C Ratio	Custom B/C Ratio	Percent Mitigation	Total Cost	Available Financing										Total Funding
						City/Town		County		State		Federal		Other		
						Amount	FY	Amount	FY	Amount	FY	Amount	FY	Amount	FY	
Fire Facilities		65.36	0.00	100	$612	$612		$0		$0		$0		$0		$612
Fire Facilities		31.75	0.00	100	$1,260	$1,260		$0		$0		$0		$0		$1,260
Fire Facilities		11.65	0.00	100	$3,434	$3,434		$0		$0		$0		$0		$3,434
Totals:					**$5,306**	**$5,306**		**$0**		**$0**		**$0**		**$0**		**$5,306**

1 . Hazardous Materials

The following table identifies "Proposed Projects" to mitigate the Hazardous Materials hazard.

No Mitigation Projects have been linked to this hazard.

5.4 Implementation Strategy and Analysis of Mitigation Projects

5.4 Implementation Strategy and Analysis of Mitigation Projects

This section serves to identify the Proposed Projects in the community.

The following tables represent the summation of all mitigation projects related to all hazards threatening the community of City of Yucaipa

Table 1. The projects are prioritized purely on the basis of the Calculated B/C Ratio.

(Dollar Amounts in Thousands)

Project No.	Local Priority	B/C Ratio	Custom B/C Ratio	Primary Hazard	CPRI	Deaths	Total Cost	Available Financing										Total Funding
								City/Town		County		State		Federal		Other		
								Amt.	FY	Amt.	FY	Amt.	FY	Amt.	FY	Amt.	FY	
Fire Facilities	3	65.36	0.00	Wildfires	3.05	10	$612	$612		$0		$0		$0		$0		$612
Fire Facilities	3	31.75	0.00	Wildfires	3.05	10	$1,260	$1,260		$0		$0		$0		$0		$1,260
Drainage Facilities	3	25.44	0.00	Flooding	3.45	0	$1,179	$1,179		$0		$0		$0		$0		$1,179
Drainage Facilities	3	18.00	0.00	Flooding	3.45	0	$1,666	$1,666		$0		$0		$0		$0		$1,666
Fire Facilities	3	11.65	0.00	Wildfires	3.05	10	$3,434	$3,434		$0		$0		$0		$0		$3,434
Detention Basins	4	5.44	0.00	Flooding	3.45	0	$5,518	$5,518		$0		$0		$0		$0		$5,518
Detention Basins	4	5.11	0.00	Flooding	3.45	0	$5,865	$5,865		$0		$0		$0		$0		$5,865
Drainage Facilities	3	4.68	0.00	Flooding	3.45	0	$6,405	$6,405		$0		$0		$0		$0		$6,405
Drainage Facilities	3	2.41	0.00	Flooding	3.45	0	$12,463	$12,463		$0		$0		$0		$0		$12,463
Drainage Facilities	3	0.73	0.00	Flooding	3.45	0	$41,306	$41,306		$0		$0		$0		$0		$41,306
Drainage Facilities	3	0.67	0.00	Flooding	3.45	0	$44,556	$44,556		$0		$0		$0		$0		$44,556
Totals:							**$124,265**	**$124,265**		**$0**		**$0**		**$0**		**$0**		**$124,265**

Table 2. The projects are prioritized purely on the basis of Local Priority.

(Dollar Amounts in Thousands)

Project No.	Local Priority	B/C Ratio	Custom B/C Ratio	Primary Hazard	CPRI	Deaths	Total Cost	Available Financing										
								City/Town		County		State		Federal		Other		Total Funding
								Amt.	FY	Amt.	FY	Amt.	FY	Amt.	FY	Amt.	FY	
Detention Basins	4	5.44	0.00	Flooding	3.45	0	$5,518	$5,518		$0		$0		$0		$0		$5,518
Detention Basins	4	5.11	0.00	Flooding	3.45	0	$5,865	$5,865		$0		$0		$0		$0		$5,865
Fire Facilities	3	65.36	0.00	Wildfires	3.05	10	$612	$612		$0		$0		$0		$0		$612
Fire Facilities	3	31.75	0.00	Wildfires	3.05	10	$1,260	$1,260		$0		$0		$0		$0		$1,260
Drainage Facilities	3	25.44	0.00	Flooding	3.45	0	$1,179	$1,179		$0		$0		$0		$0		$1,179
Drainage Facilities	3	18.00	0.00	Flooding	3.45	0	$1,666	$1,666		$0		$0		$0		$0		$1,666
Fire Facilities	3	11.65	0.00	Wildfires	3.05	10	$3,434	$3,434		$0		$0		$0		$0		$3,434
Drainage Facilities	3	4.68	0.00	Flooding	3.45	0	$6,405	$6,405		$0		$0		$0		$0		$6,405
Drainage Facilities	3	2.41	0.00	Flooding	3.45	0	$12,463	$12,463		$0		$0		$0		$0		$12,463
Drainage Facilities	3	0.73	0.00	Flooding	3.45	0	$41,306	$41,306		$0		$0		$0		$0		$41,306
Drainage Facilities	3	0.67	0.00	Flooding	3.45	0	$44,556	$44,556		$0		$0		$0		$0		$44,556
Totals:							**$124,265**	**$124,265**		**$0**		**$0**		**$0**		**$0**		**$124,265**

Table 3. The projects are prioritized purely on the basis of Total Cost.

(Dollar Amounts in Thousands)

Project No.	Local Priority	B/C Ratio	Custom B/C Ratio	Primary Hazard	CPRI	Deaths	Total Cost	Available Financing										Total Funding
								City/Town		County		State		Federal		Other		
								Amt.	FY	Amt.	FY	Amt.	FY	Amt.	FY	Amt.	FY	
Drainage Facilities	3	0.67	0.00	Flooding	3.45	0	$44,556	$44,556		$0		$0		$0		$0		$44,556
Drainage Facilities	3	0.73	0.00	Flooding	3.45	0	$41,306	$41,306		$0		$0		$0		$0		$41,306
Drainage Facilities	3	2.41	0.00	Flooding	3.45	0	$12,463	$12,463		$0		$0		$0		$0		$12,463
Drainage Facilities	3	4.68	0.00	Flooding	3.45	0	$6,405	$6,405		$0		$0		$0		$0		$6,405
Detention Basins	4	5.11	0.00	Flooding	3.45	0	$5,865	$5,865		$0		$0		$0		$0		$5,865
Detention Basins	4	5.44	0.00	Flooding	3.45	0	$5,518	$5,518		$0		$0		$0		$0		$5,518
Fire Facilities	3	11.65	0.00	Wildfires	3.05	10	$3,434	$3,434		$0		$0		$0		$0		$3,434
Drainage Facilities	3	18.00	0.00	Flooding	3.45	0	$1,666	$1,666		$0		$0		$0		$0		$1,666
Fire Facilities	3	31.75	0.00	Wildfires	3.05	10	$1,260	$1,260		$0		$0		$0		$0		$1,260
Drainage Facilities	3	25.44	0.00	Flooding	3.45	0	$1,179	$1,179		$0		$0		$0		$0		$1,179
Fire Facilities	3	65.36	0.00	Wildfires	3.05	10	$612	$612		$0		$0		$0		$0		$612
Totals:							**$124,265**	**$124,265**		**$0**		**$0**		**$0**		**$0**		**$124,265**

Table 4. The projects are prioritized purely on the basis of The CPRI of the Primary Hazard.

(Dollar Amounts in Thousands)

Project No.	Local Priority	B/C Ratio	Custom B/C Ratio	Primary Hazard	CPRI	Deaths	Total Cost	Available Financing										Total Funding
								City/Town		County		State		Federal		Other		
								Amt.	FY	Amt.	FY	Amt.	FY	Amt.	FY	Amt.	FY	
Drainage Facilities	3	25.44	0.00	Flooding	3.45	0	$1,179	$1,179		$0		$0		$0		$0		$1,179
Drainage Facilities	3	18.00	0.00	Flooding	3.45	0	$1,666	$1,666		$0		$0		$0		$0		$1,666
Detention Basins	4	5.44	0.00	Flooding	3.45	0	$5,518	$5,518		$0		$0		$0		$0		$5,518
Detention Basins	4	5.11	0.00	Flooding	3.45	0	$5,865	$5,865		$0		$0		$0		$0		$5,865
Drainage Facilities	3	4.68	0.00	Flooding	3.45	0	$6,405	$6,405		$0		$0		$0		$0		$6,405
Drainage Facilities	3	2.41	0.00	Flooding	3.45	0	$12,463	$12,463		$0		$0		$0		$0		$12,463
Drainage Facilities	3	0.73	0.00	Flooding	3.45	0	$41,306	$41,306		$0		$0		$0		$0		$41,306
Drainage Facilities	3	0.67	0.00	Flooding	3.45	0	$44,556	$44,556		$0		$0		$0		$0		$44,556
Fire Facilities	3	65.36	0.00	Wildfires	3.05	10	$612	$612		$0		$0		$0		$0		$612
Fire Facilities	3	31.75	0.00	Wildfires	3.05	10	$1,260	$1,260		$0		$0		$0		$0		$1,260
Fire Facilities	3	11.65	0.00	Wildfires	3.05	10	$3,434	$3,434		$0		$0		$0		$0		$3,434
Totals:							**$124,265**	**$124,265**		**$0**		**$0**		**$0**		**$0**		**$124,265**

Table 5. The projects are prioritized purely on the basis of the potential fatalities from the Primary Hazard.

(Dollar Amounts in Thousands)

Project No.	Local Priority	B/C Ratio	Custom B/C Ratio	Primary Hazard	CPRI	Deaths	Total Cost	Available Financing										Total Funding
								City/Town		County		State		Federal		Other		
								Amt.	FY	Amt.	FY	Amt.	FY	Amt.	FY	Amt.	FY	
Fire Facilities	3	65.36	0.00	Wildfires	3.05	10	$612	$612		$0		$0		$0		$0		$612
Fire Facilities	3	31.75	0.00	Wildfires	3.05	10	$1,260	$1,260		$0		$0		$0		$0		$1,260
Fire Facilities	3	11.65	0.00	Wildfires	3.05	10	$3,434	$3,434		$0		$0		$0		$0		$3,434
Drainage Facilities	3	25.44	0.00	Flooding	3.45	0	$1,179	$1,179		$0		$0		$0		$0		$1,179
Drainage Facilities	3	18.00	0.00	Flooding	3.45	0	$1,666	$1,666		$0		$0		$0		$0		$1,666
Detention Basins	4	5.44	0.00	Flooding	3.45	0	$5,518	$5,518		$0		$0		$0		$0		$5,518
Detention Basins	4	5.11	0.00	Flooding	3.45	0	$5,865	$5,865		$0		$0		$0		$0		$5,865
Drainage Facilities	3	4.68	0.00	Flooding	3.45	0	$6,405	$6,405		$0		$0		$0		$0		$6,405
Drainage Facilities	3	2.41	0.00	Flooding	3.45	0	$12,463	$12,463		$0		$0		$0		$0		$12,463
Drainage Facilities	3	0.73	0.00	Flooding	3.45	0	$41,306	$41,306		$0		$0		$0		$0		$41,306
Drainage Facilities	3	0.67	0.00	Flooding	3.45	0	$44,556	$44,556		$0		$0		$0		$0		$44,556
Totals:							**$124,265**	**$124,265**		**$0**		**$0**		**$0**		**$0**		**$124,265**

5.5 Multi-Jurisdictional Mitigation Strategy

Not Applicable

Section 6 – Plan Maintenance

6.1 Monitoring, Evaluating and Updating the Plan

6.1 Monitoring, Evaluating and Updating the Plan

Plan Last Updated On: 8/13/2004

Description of Plan Maintenance Procedures:

The planning team will oversee plan maintenance. Department Heads will be responsible for monitoring when changes are made to the laws, policies, or budgets that may have an impact on the Mitigation Plan. Department Heads will continue to serve as facilitators, responsible for holding regularly scheduled meetings, assigning specific tasks necessary to monitor and update the plan, and serving as the City's liaison with those assigned implementation responsibilities. Department Heads will also serve as the City's liaison with participating municipalities.

After the initial plan is finalized and adopted, the City will:

Evaluate the effectiveness of previously implemented mitigation actions.
Examine why any non-capital actions are not completed.
Review mitigation efforts and actions being undertaken through other existing plans (i.e. General Plan, EOP, CIP, etc.).
Address changing land use patterns and new developments.
Identify any changes in risk assessment and/or risk vulnerability.

Annual meetings will be scheduled at a time and location convenient to all. Meetings will be open to the public and will be advertised in the local newspaper, the City's website, and posted in various facilities. In the event that the annual review requires modifications to the plan, the planning team will oversee and approve all revisions, post proposed changes to the plan on the City's website, and submit all revisions for adoption by all of the jurisdictions. A copy of the plan revisions will be submitted to all holders of the original plan in a timely manner.

At the end of the five-year cycle of the program, the planning team will oversee a major update to the plan that follows the Federal planning criteria in effect at the time of the update. The updated plan will again be submitted through the State Office of Emergency Services for FEMA approval.

A critical part of maintaining an effective and relevant natural hazards mitigation plan is ongoing public review and comment. Consequently, the City is dedicated to direct involvement of its citizens in providing feedback and comments on the plan on a continued basis. To this end, the plan will be available for viewing through various resources (i.e., City website, City Hall, etc.). Public meetings will be held when significant modifications to the plan are required or when otherwise deemed necessary by the City Manager or his/her designee. The public will be able to express their concerns, ideas and opinions at the meetings.

Associated Files
File Title: FY 2004/05 CIP
File Description: CIP Uploaded: 8/11/2004

6.2 Implementation through Existing Programs

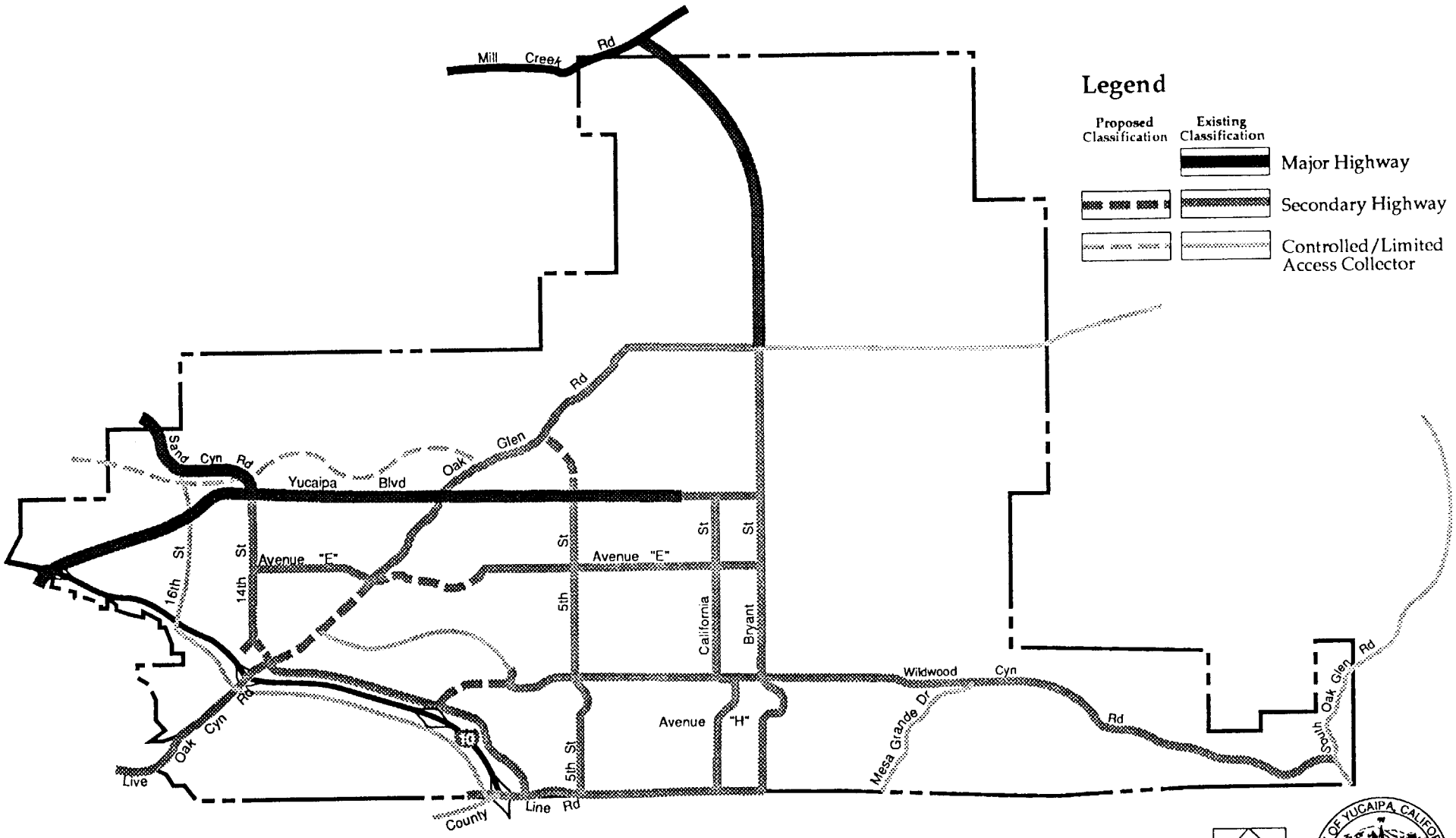
This document will be incorporated as appropriate to existing City plans and will be utilized as a source document for updates and changes to other plans as deemed appropriate. It will also be reviewed and updated when the City adopts new building and fire codes or regulations. The City will review the mitigation projects during the five-year Capital Improvement Program (CIP).

All incorporations of this plan and the activities herein to other plans shall be given the adequate public process and approval of the legislative body. This plan will be utilized in the preparation of Hazard Mitigation Planning Grants as may become available to the City.

APPENDICES

Circulation Map
Earthquake Magnitudes
Fire and Flood Hazard Zones
Geological/Seismic Map
Groundwater Elevations Map
Land Use Districts Map
Storm Drain Plan Map

The City of Yucaipa Hazard Mitigation Plan includes reference to various imported files, available at http://www.mitigationplan.com).

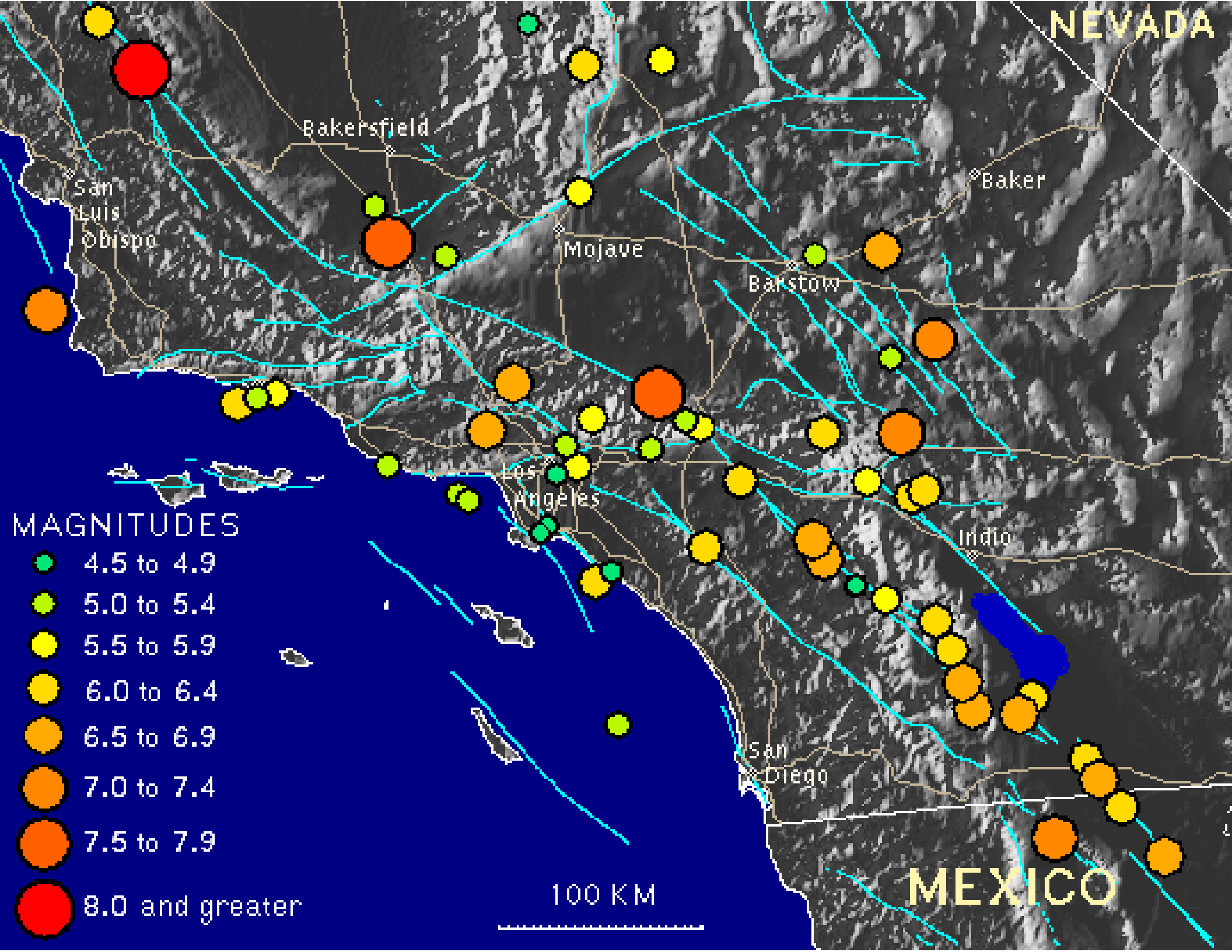


Circulation Map

Yucaipa General Plan

prepared by
J.L.Webb Planning, Inc.

VII-1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San Luis Obispo
Mojave
Baker
Barstow
Los Angeles
Indio
San Diego
MEXICO
MAGNITUDES
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5.0 to 5.4
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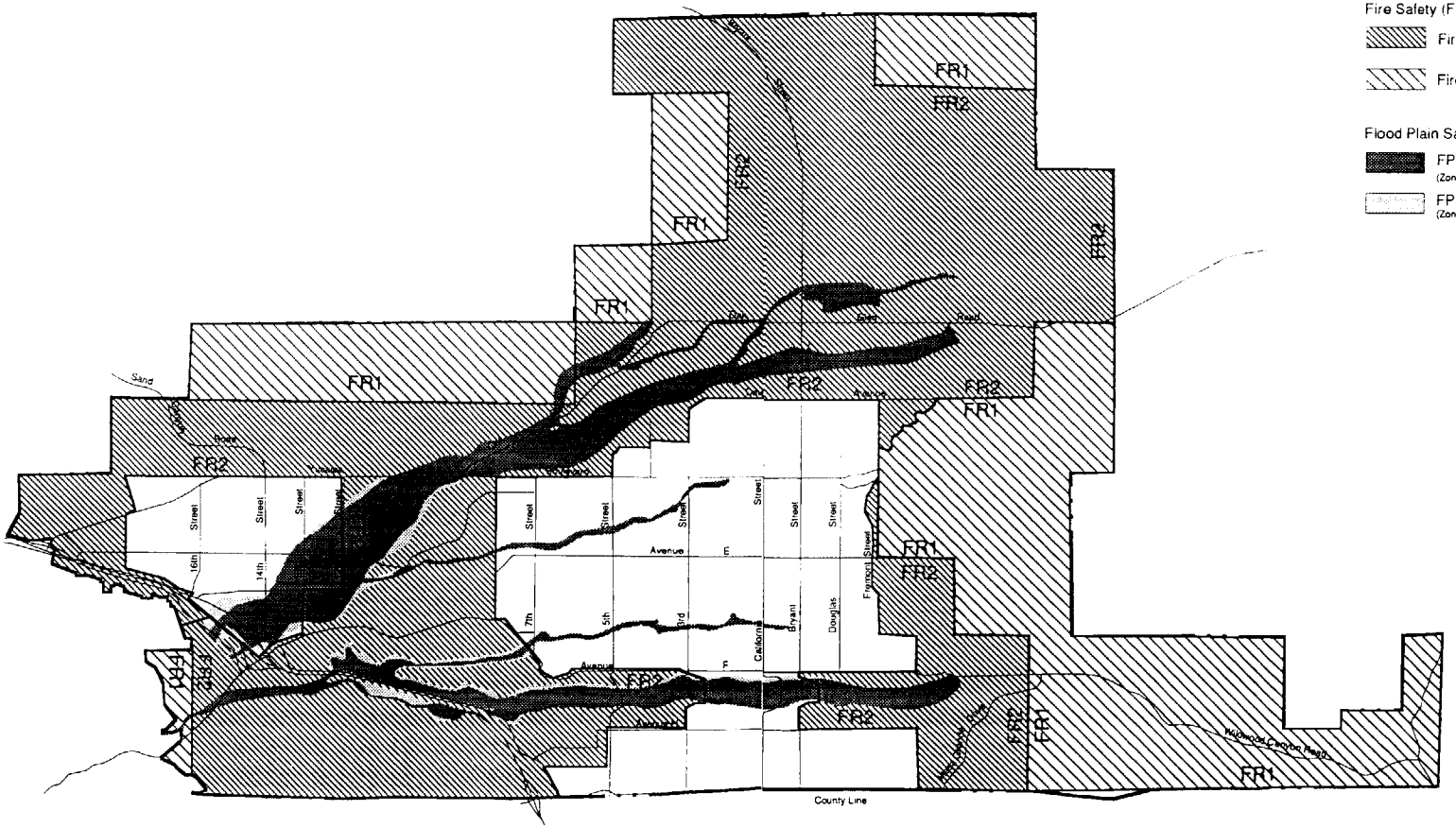
6.5 to 6.9
7.0 to 7.4
7.5 to 7.9
8.0 and greater
100 KM

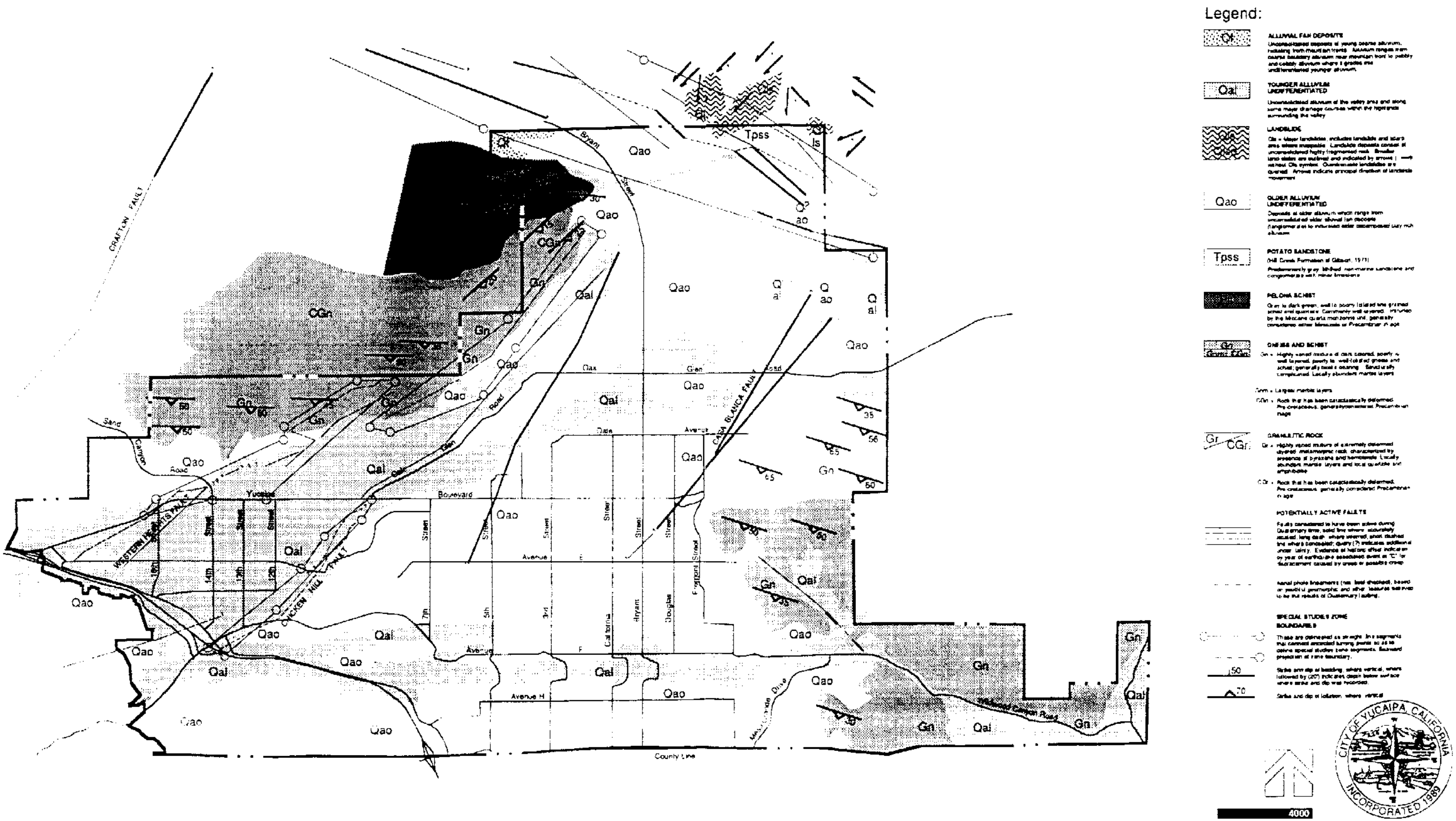


Yucaipa General Plan

Fire and Flood Hazard Zones

prepared by
J L Webb Planning, Inc.

X-1

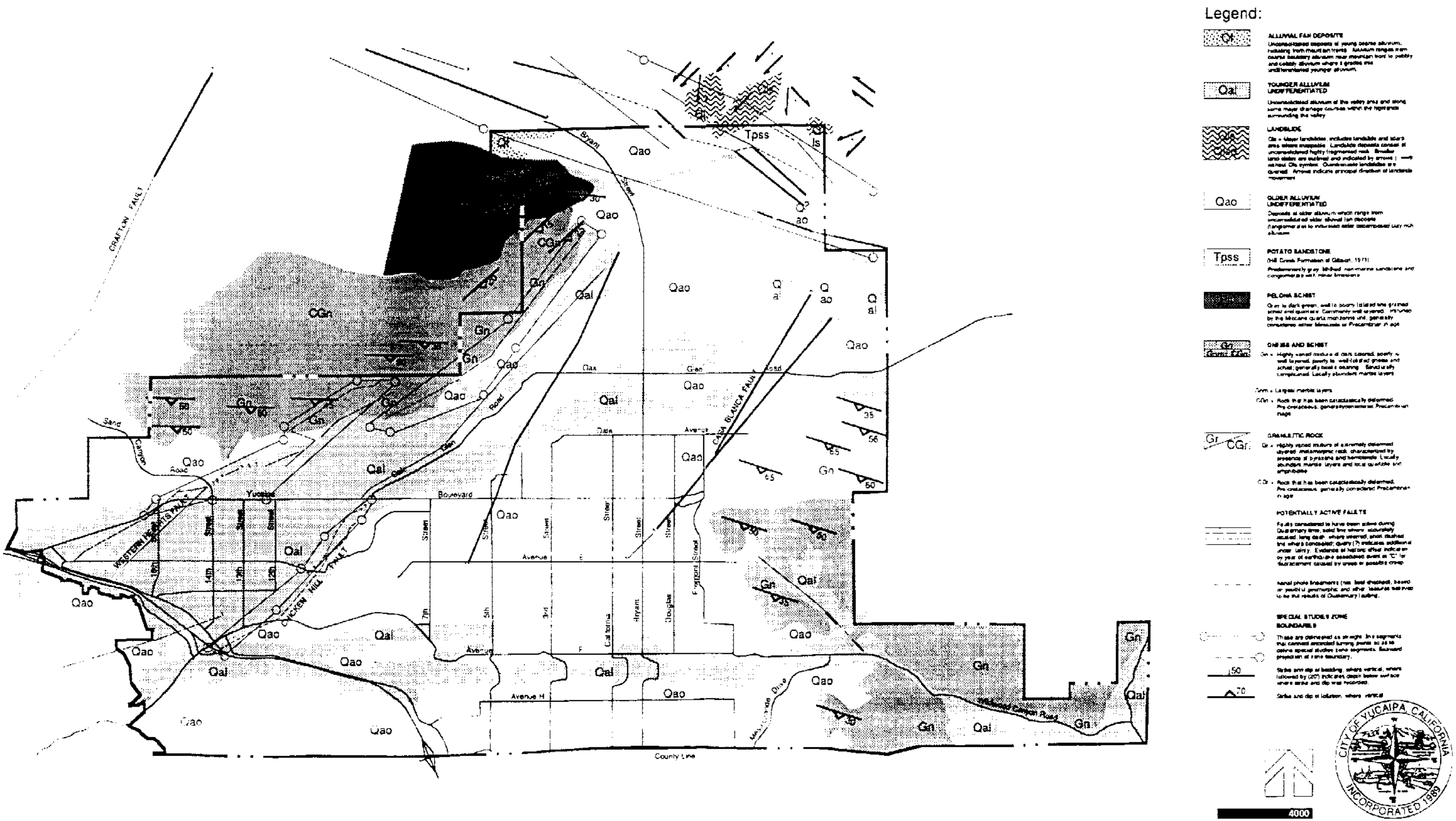


Geological/Seismic Map

Yucaipa General Plan

X-2

prepared by J.L.Webb Planning, Inc.

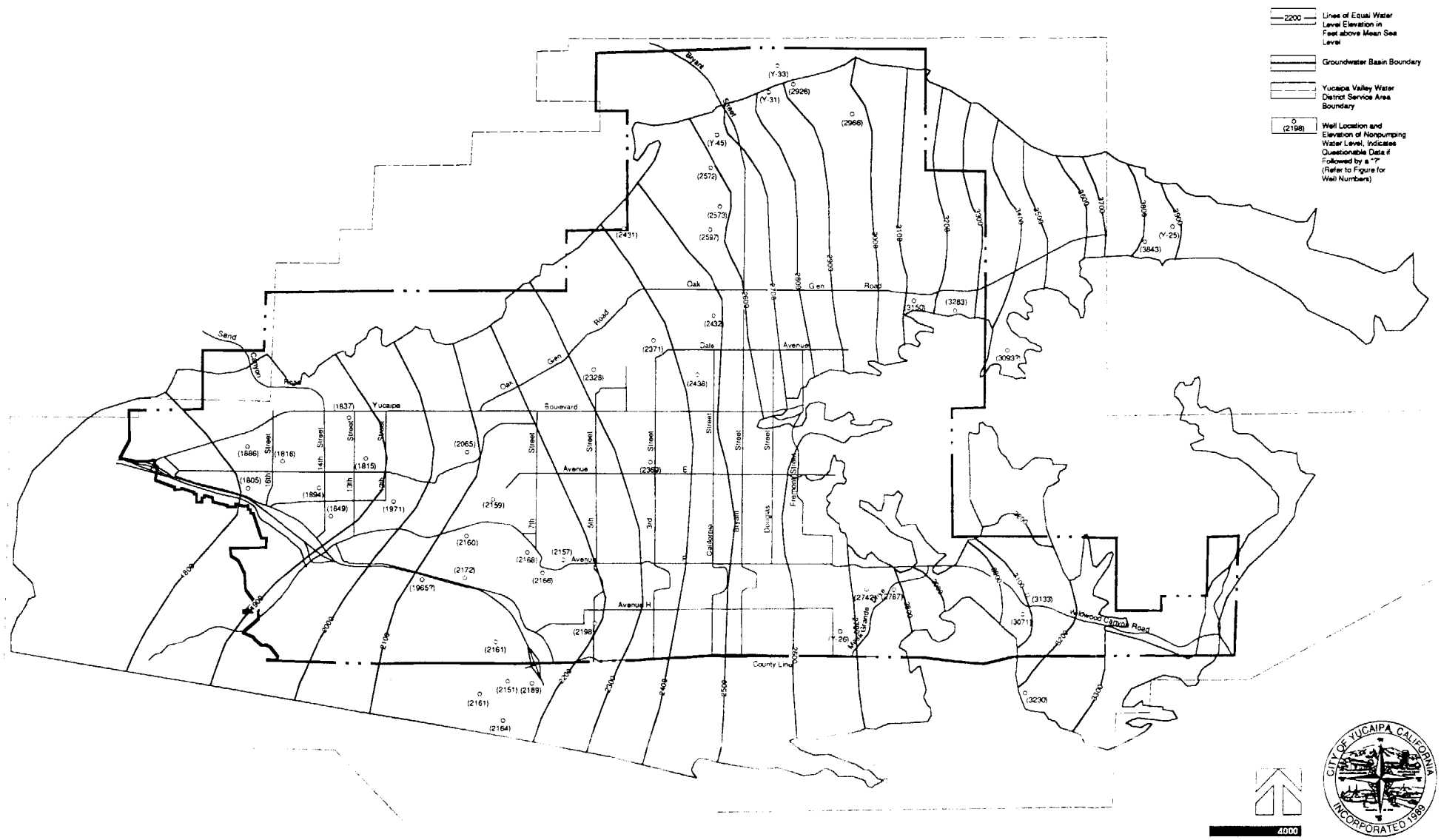


Geological/Seismic Map

Yucaipa General Plan

prepared by J.L. Webb Planning, Inc.

X-2

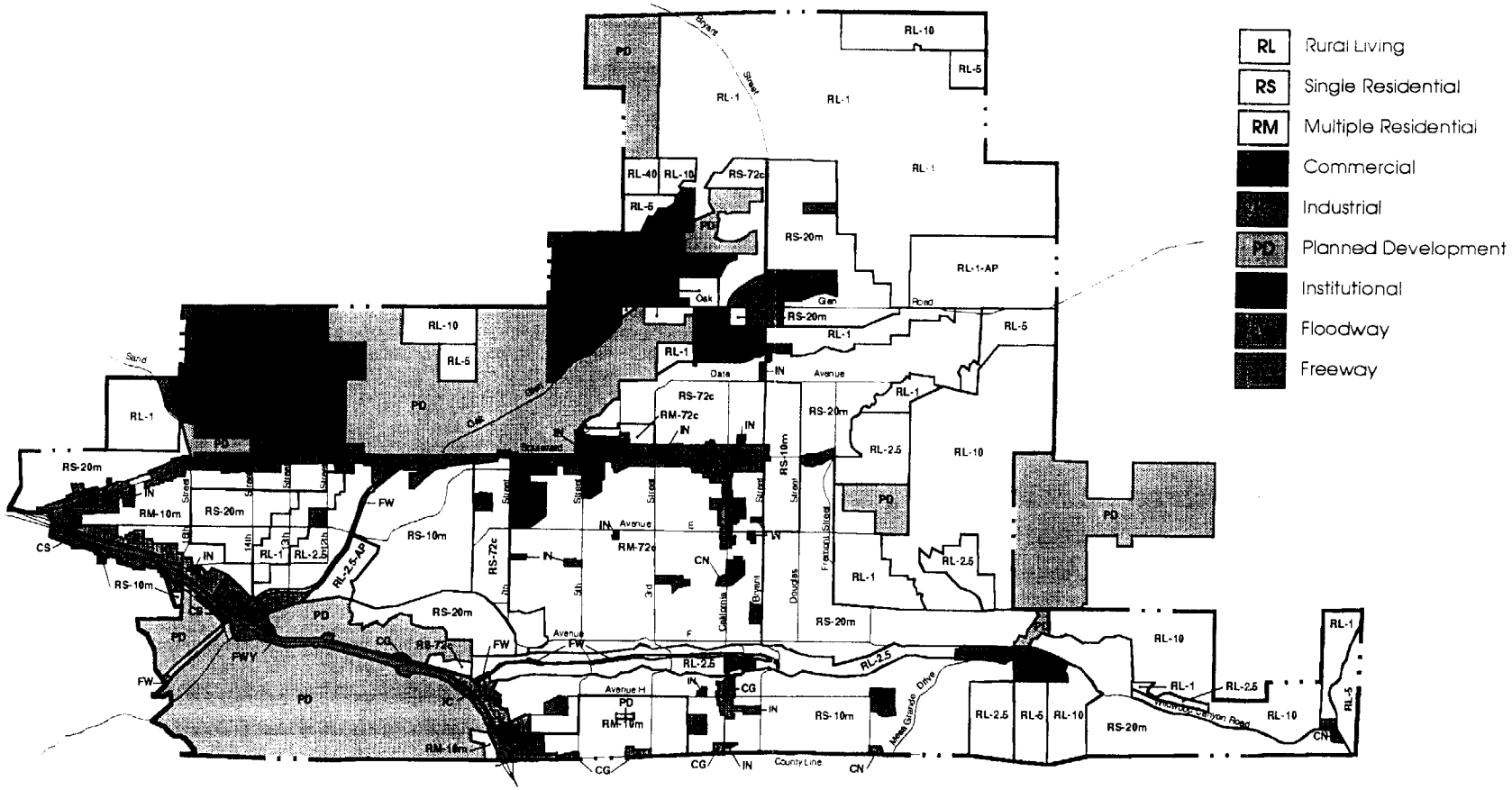


Yucaipa General Plan

Groundwater Elevations

prepared by J.L.Webb Planning, inc.

X-3



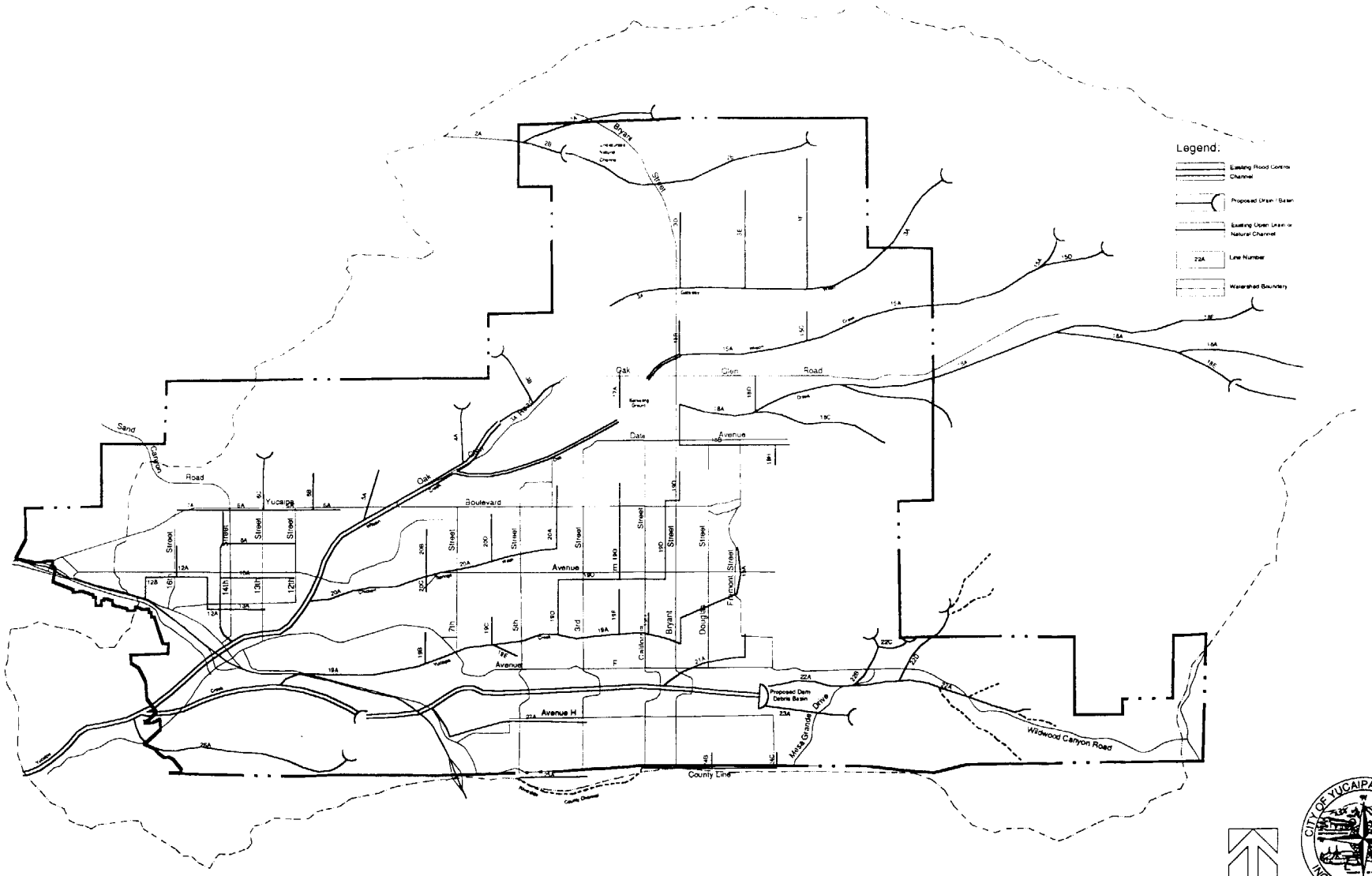
CITY OF YUCAIPA, CALIFORNIA INCORPORATED 1989

Yucaipa General Plan

Official Land Use Districts

prepared by
J.L. Webb Planning, Inc.

II-4



Storm Drain Plan

Yucaipa General Plan

prepared by
J.L.Webb Planning, Inc.

IX-2