

## A. Flooding

### 1. 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) as on their Flood Insurance Rate Maps (FIRM). The most recent versions of these maps for the City of Yucaipa were prepared in ~~October~~ March of ~~1990~~ 1996 and are reflected in the Fire and Flood Hazard Zones, ~~Exhibit X-1 Appendix C-5~~. 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.

### 2. Flood Control

The ~~Report on Comprehensive Storm Drain Plan No. 5~~ "Master Plan of Drainage" was prepared in ~~May~~ November of ~~1979~~ 1993 by ~~Associated Engineers for the San Bernardino County Flood Control District for Zone 3, Yucaipa area~~ Boyle Engineering Corporation. This report provides a detailed description of the area's existing storm drain facilities and needs, hydrological and hydraulic design criteria for the proposed storm system and a cost estimate for its construction. A map of the proposed system is included in the Infrastructure and Public Facilities Element, Section IX, as **Exhibit IX-2**, Storm Drain Plan. As of this writing, only a ~~small~~ portion of the proposed additional storm drain system has been constructed. This consists of a section of storm drain in a mobile home park area between 4th and 6th Streets located along the Chicken Springs Wash Storm Drain Line #20A. A portion of the proposed system has been constructed in Gateway Wash. Funding has been unavailable for further construction of the system.

Existing storm drain facilities in Yucaipa include improved channels in Wilson Creek and Oak Glen Creek, as well as reservoirs at the Yucaipa ~~Lakes~~ Regional Park and a flood control basin north of Oak Glen Road east of Bryant Street and nearby spreading grounds. The proposed expansion of the storm drain system is quite extensive and includes the extension of existing improved channels to the base of the hills to the east, the addition of improved channels or underground drains along the County line, Yucaipa Creek northeast of the freeway, Chicken Springs Wash, Gateway Wash and the Mill Creek tributary, as well as other branches and tributaries. This proposed expansion of the storm drain system would increase the linear footage of improved channels and underground drains from 18.2 miles to 70.3 miles, an increase of 386%.

### 3. Protection of the Community

At the time of the design of ~~Storm Drain Plan No. 5~~ the "Master Plan of Drainage", the funds were not available for the construction of the system, and there is still a lack of funding for this project. Although the hazards to human life posed by the existing potential for flooding are minimal, the potential for extensive property damage exists. Another potential problem from flooding in Yucaipa results from the fact that several main north-south streets cross 100-year flood zones and could become impassable during a 100-year event. This could cause severe traffic problems and impede emergency vehicles.

## B. Seismic Safety

Information in this section is taken from an investigation of geology and geotechnical hazards by G.A. Nicoll & Associates, Inc. on May 7, 1991, and from the EIR prepared by ERC Environmental and Energy Systems Company, Sedway Cooke Associates and Wildan Associates in May of 1989 for the County of San Bernardino's General Plan Update. A copy of this EIR is on file with the County. **Exhibit X-2 Appendix C-6** shows existing geologic formations and seismic features within the City of Yucaipa. ~~(This exhibit will be in color in the final General Plan.)~~

### 1. 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 southwestern portion of the County. 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 downdropped crustal blocks which define the current topographic configuration of Yucaipa.

### 2. 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.

3. **Landslide Hazards**

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.

4. **Seismic Hazards**

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 corner 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.

**C. Fire**

1. **Protection of the Community**

- a. Existing Level of Service
  - i. Services

Yucaipa area fire protection and emergency medical services are provided by two local department stations. One of these facilities is Yucaipa Station No. 43 551, located on Bryant Street just south of Oak Glen Road. This facility was constructed by the California Department of Forestry and Fire Protection (CDF) for the purpose of wildland fire protection. In recognition of the ~~County (CSA 38)~~ CDF responsibilities for structural fire protection, the State provides additional apparatus bays and barrack facilities ~~at no cost~~ under a service contract to local government, ~~and the County funds some services to supplement the State services.~~ The second station is Crafton Hills Station No. 48 552, located on Yucaipa Boulevard between 13 and 14th Streets. This facility is owned by the City and operated by ~~the County (CSA 38)~~ CDF

Additional department fire engine companies support the Yucaipa area on a regional basis from the Oak Glen Station No. 39, located on Oak Glen Road in the community of Oak Glen, the Mentone Station No. 9, located on

Crafton Avenue in the community of Mentone and two California Department of Forestry and Fire Protection/Riverside County Fire Department stations located in the City of Calimesa and the community of Cherry Valley (available through reciprocal agreement).

The department (inclusive of the City of Yucaipa) has mutual aid available through the State's Master Mutual Aid Agreement and a specific agreement with the adjacent City of Redlands.

The City entered into an agreement on October 10, 1990 with the California Department of Forestry and Fire Protection which provides for wildland fire protection of 5,800 acres located within the City. Under the terms of the agreement, resources such as aircraft, bulldozers, hand crews and related support personnel and equipment will be provided at no additional cost to the City. Such resources are normally available on a for-hire basis only to Cities without wildland fire protection agreements. In the event an emergency incident requires additional equipment, engine companies, bulldozers, hand crews and aircraft can be dispatched from County-wide or State-wide resources.

ii. Staffing

Station No. ~~43~~ 551 (Yucaipa), at the County City level, consists of one engine company with ~~six~~ three firefighter personnel assigned to a triple combination fire engine. An automatic paging system is used to notify the 12 paid-call (volunteer) firefighters to staff additional equipment when multiple or major accidents occur. At the State level, Station No. ~~43~~ 551 consists of two wildland engine companies staffed by four full-time firefighter personnel and three seasonal firefighter personnel. During non-declared fire season (January through April), ~~the County (GSA-38)~~ the City, through its Amador contract, funds the staffing and equipment to maintain year-round coverage for one of the two wildland fire engines. At the State/County City level, there is one Battalion Chief and one Fire Protection Prevention Officer.

Station No. ~~48~~ 552 (Crafton Hills), at the County City level consists of one engine company with ~~five~~ three firefighter personnel assigned to a triple combination fire engine. A second triple combination fire engine and a rescue squad are assigned to this station and are staffed on an on-call basis by a 12-person paid call (volunteer) firefighter company notified by an automatic paging system.

<u>Total Existing Staff</u>	<u>Permanent</u>	<u>Seasonal</u>	<u>Paid Call</u>
State (during declared fire season)	4	<u>36</u>	
State/ <u>County City</u>	2		
<u>County City</u>	<u>149</u>		24
<u>County City</u> Paramedics	6		

The above staffing level provides sufficient firefighters and firefighter/paramedics to staff the permanent staffed equipment with a minimum of ~~two~~ three personnel.



- iii. Equipment (Vehicles)  
Station No. ~~43~~ 551 (Yucaipa), at the County City level, consists of one triple combination fire engine and ~~one paramedic rescue squad~~. At the State level there are two Midland fire engines, and at the State/County City level there is one battalion chief vehicle and fire prevention officer vehicle.

Station No. ~~48~~ 552 (Crafton Hills), at the County City level, consists of ~~two~~ three triple combination fire engines and one rescue squad.

- iv. Facilities

Station No. ~~43~~ 551 (Yucaipa) is a State-owned facility with a four-bay apparatus room, barracks, kitchen, office and helicopter landing pad.

Station No. ~~48~~ 552 (Crafton Hills) is a County City-owned facility with a ~~three~~ four-bay apparatus room, barracks, kitchen and office. ~~A two-bay apparatus room is currently being added to the existing apparatus room to provide a total of four bays. Completion of this addition is expected by mid-July of 1994.~~

- v. Paramedic Service

In June of 1987 the Yucaipa electorate approved a special tax levy for paramedic/firefighter services at an amount not-to-exceed \$24 per resident/al dwelling unit and \$35 per commercial unit per year within CSA 38 Improvement Zone "M," which includes all of the City of Yucaipa and the unincorporated community of Oak Glen. (The community of Oak Glen is located immediately adjacent to the eastern boundary of the City of Yucaipa.) In March of 2004, the paramedic tax was increased to \$52 per residential unit, \$78 per small business, and \$156 per large business by the Yucaipa electorate. This special tax funds six paramedic/firefighters and the equipment necessary for a paramedic program. ~~The paramedic rescue squad is staffed with a minimum of two personnel and is currently assigned to Fire Station No. 13.~~ Each of the first response city engines (2) are staffed with one paramedic at all times.

- b. Existing Standards

In 1989 a set of standards entitled "Fire Safety Overlay District" (FR) was adopted for use in the City of Yucaipa. This ordinance identifies two types of areas where special fire protection measures must be taken. These are shown as FR1 and FR2 on **Exhibit X-I**, Fire and Flood Hazard Zones. A copy of this ordinance is on file with the City Planning Department.

Standards which apply to both FR1 and FR2 designated areas include special construction standards, building separation standards, project design requirements, fuel modification and erosion control. Standards which apply to FR1 areas include all those mentioned above, but are more restrictive.

The following Peakload Water Supply System Guidelines are applied to new development as it comes into the City.

**Table X-1  
Peakload Water Supply System Guidelines<sup>1</sup>**

<u>Land Use</u>	<u>Fire Flow System<sup>2</sup></u>	
	Flow (gallons/minute)	Duration (hours)
Residential Density		
Group R Division 3 <sup>3</sup>	1,500	2
Group R Division 1 <sup>4</sup>	2,500	2
Commercial and Industrial	3,000	3

<sup>1</sup> These guidelines were developed by the Office of Planning in conjunction with the County Fire Warden for fire protection in areas of San Bernardino County where water systems do not exist.

<sup>2</sup> These numbers are based upon Uniform Fire Code calculations. Individual development requirements may vary according to structure square footage, spacing and construction material. In areas where water cyclomes are not required, individual dwellings should generally have a minimum of 5,000 gallons of on-site storage for total peakload water supply.

<sup>3</sup> Single-family Residential (according to Fire and Building Code under Title 24)

<sup>4</sup> Hotels, Motels, Apartments, Monasteries, Dormitories and Condominiums (according to Fire and Building Code under Title 24)

Where fire flow standards are not met, a fire sprinkler system and large capacity piping are required. One example of this in Yucaipa is the high school, which has been required to improve its fire safety system. Only half of its 3,000 gpm fire flow capacity can be met; therefore, a fire sprinkler system has been required.

c. Existing Needs

i. Staffing

Station No. 43 551 (Yucaipa) is staffed with a minimum of 6 firefighters per shift. ~~needs three personnel to replace the anticipated loss of State-funded firefighters.~~ Prior to the incorporation of the Yucaipa area, the California Department of Forestry and Fire Protection Station No. 43 551 protected 29,340 acres of State Responsibility Area within its first-in response area. Upon incorporation, the City assumed the legal and financial responsibility to protect 12,200 acres of previously designated State Responsibility Area (wildland). As previously indicated, the City has entered into an agreement with the California Department of Forestry and Fire Protection to provide wildland fire protection on 5,800 acres. It is highly recommended that the City maintain the wildland fire protection agreement, adjusted annually, with the State to prevent major conflagrations, major losses to natural resources and habitat, major losses to development in the urban/rural interface area and loss of life. California Department of Forestry and Fire Protection's facilities are located throughout the State in order to provide a basic level of service to lands equally based on value. As the Yucaipa Station's State Responsibility Area for fire protection is reduced by incorporations and development, this may mean a reduction of one State wildland fire engine, along with the associated staff currently assigned to the fire station.

Station No. 48 552 (Crafton Hills) is staffed with a minimum of ~~needs one firefighter~~ to achieve the ~~two~~ three personnel minimum staffing level on a daily basis.

Six ~~eight~~ personnel are needed to achieve the ~~two~~ three firefighter minimum staffing level for the a new fire station. (Based on response studies and fire station area coverage, a third fire station facility is needed in the southeast portion of the City to meet the current level of service provided to the remaining portion of the City.) A proposed fire station property site has been purchased by the City at the SW corner of Wildwood Canyon Road and 5<sup>th</sup> Street.

The above needs are necessary to maintain the current level of fire protection and emergency medical services to Yucaipa.

ii. Equipment

Fire Station No. 43 551 currently needs no new equipment, although if a State-funded fire engine should be eliminated, one fire engine would need to be added to maintain the existing level of service.

Station No. 48 552 has no equipment needs. Note: New fire engines were purchased in 2003 & 2004.

The new fire station needs one fire engine and equipment, and one rescue squad and equipment.

iii. Facilities

The new fire station needed in the southeast portion of the City requires land should be built on already purchased land, and it will need a building and furniture, all of which would be one-time costs. On January 14, 1991, the City enacted an ordinance establishing Development Impact Fees to fund fire protection facilities. These fees should fund future facility and equipment needs. Due to the relatively recent enactment of the ordinance, there are not sufficient funds to construct and equip the proposed new fire station. It is recommended that the City fund the construction and equipping of the new fire station due to the immediate need to bring the fire protection level of that portion of the City up to the level of service provided to other portions of the City.

iv. Paramedic Service

A funding mechanism already exists for the paramedic/firefighter program. The demand for increased service is driven by development/population increases. Increases in the number of dwelling units and commercial developments will increase the revenue funding the program. thus allowing the increase in personnel and equipment to maintain the established minimum level of service. This, however, did not cover increasing costs, and in March, 2004, the Yucaipa electorate did approve an increase that will fund existing service levels through about 2013.

d. Future Needs

A discussion of the development impact fees adopted by the City in January of 1991 should precede a listing of future needs. These fees were established based upon the population served (32,000) and commercial/industrial square footage served (5,625,000). In determining the level of existing service, the San Bernardino County Regional Fire Facility Study identified the City of Yucaipa as an Urban II area, having areas with medium

hazard occupancies, in accordance with the National Fire Protection Association Handbook, Section 15, Chapter 2. The Urban II planning area typically has single and multiple family occupancies. This regional classification is comprised of land use improvement levels 1,2 and 3 as defined in the ~~San Bernardino County~~ General Plan. They typical fire service response to a fire incident in this area would include three engineers, ~~one rescue~~ and one chief officer. The adopted fees will maintain the level of service previously defined in this section, along with the current average response time of four to six minutes, with the exception of responses to the southeast portion of the City.

- i. **Recommended Level of Service for Staffing/Personnel**  
 A minimum of ~~four~~ three firefighter personnel per fire engine on those fire engines that are staffed per shift should be provided, for a total of ~~10~~ 12. A minimum of six firefighter personnel per ladder/truck company per shift should be provided, for a total of 14. ~~A minimum of two firefighter/paramedic personnel per paramedic squad per shift should be provided, for a total of six.~~ One fire prevention/education officer should be provided for investigations, fire code/ordinance enforcement and fire prevention education. One battalion chief should be provided for continuous administrative and major incident coverage within the City. ~~One part-time equipment mechanic should be provided for.~~ A funding mechanism to phase in the above personnel staffing plan should also be developed and approved.
  
- ii. **Recommended Level of Service for Equipment (one-time cost)** Based on the estimated population at build-out, a total of five fire engines should be provided simply to meet the population criteria. Additional fire engine companies should be added based on the commercial/industrial square footage protected. Larger commercial developments could dictate new fire station buildings and their related fire engines. Further, ~~one~~ two fire engines should be maintained in reserve, and housed at one of the ~~five~~ four fire stations and staffed on an on-call basis by a paid-call fire company. One ladder/truck, ~~two paramedic rescue squads~~, one fire prevention/education officer vehicle and one battalion chief vehicle should be provided.

**Summary of Equipment Needs**

<u>Item</u>	<u>Have</u>	<u>Need</u>
Fire Engines	<u>35</u>	3*
<del>Ladder/Truck</del>	0	4
<del>Paramedic Rescue Squad</del>	4	4
Fire Prevention/Ed. Officer Vehicle	1**	1
Battalion Chief Vehicle	1***	1

\* The number of engines shown is based on the population criteria only. Additional engines would need to be added based on the commercial/industrial square footage criteria.

\*\* The current fire prevention vehicle is funded by the cities of Yucaipa & Highland (50%/50%) County. The identified vehicle is proposed for exclusive City use.

\*\*\* The current battalion chief is funded by the State/County. City The proposed vehicle is for continuous coverage of the City.

~~Note: The staffing level of the fire engines could be reduced to a total of three personnel per shift, and the truck company could be reduced to a total of five personnel per shift with the adoption of an ordinance requiring the installation of residential fire sprinklers in all new construction and all new commercial construction 5,000 square feet or more. If a fire sprinkler ordinance is adopted, strong consideration could be given to reducing the total number of fire station facilities to four.~~

## 2. High Fire Risk Areas

See ~~Exhibit X-1 Appendix C-5~~, Fire and Flood Hazard Zones, and refer to ~~Section 85.02, Fire Safety Overlay District, of the San Bernardino County Zoning Ordinance. Article 1, of Chapter 2, of Division 5, of the Development Code "Fire Safety Overlay District"~~.

### D. Hazardous Wastes

The following is an outline of the Hazardous Waste Management Plan that has been adopted by the City of Yucaipa. This plan contains specific standards for the processing, treatment, handling and disposal of hazardous materials. A copy of this plan is available from the Planning Division.

A list of hazardous waste handlers in Yucaipa is also available through the San Bernardino County Department of Environmental Health Services.

1. Introduction
2. Existing Programs for Dealing with Hazardous Materials and Waste
3. Waste Generation Levels, Facility Inventory and Needs Assessment
4. Waste Minimization
5. Siting of Hazardous Waste Facilities
6. Handling and Storage of Hazardous Materials
7. Regulatory Program for Generators
8. Land Use Requirements for Generators and Handlers
9. Household Hazardous Waste
10. Transportation
11. Enforcement and Emergency Response
12. Site Mitigation and Long Term Remedial Action
13. Public Education and Participation
14. Implementation Schedule and Organizational Responsibilities

## **E. Safety and Hazardous Waste Goals, Policies and Actions**

The following General Plan goals for the Safety and Hazardous Waste 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 S-1** Minimize the potential risks resulting from the exposure of City residents to man-made and natural hazards with the following priorities: loss of life or injury, damage to property, litigation, excessive maintenance and other social and economic costs.

### **Policies**

- A. Aggressively enforce all federal, state and local regulations pertaining to the transportation, storage and use of all hazardous materials.
- B. The City shall support the development of fire protection facilities to the appropriate levels of service defined by the ~~San Bernardino County Fire Department~~. California Department of Forestry and Fire Protection.
- C. Inform and educate the public of the risks from natural and man-made hazards, of methods available for hazard abatement, prevention, mitigation and avoidance and of procedures to follow during emergencies.
- D. Promote the establishment of a household hazardous waste collection center.
- E. 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.

### **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.

F. 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.

G. 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 Department Division of Building and Safety.

H. 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.

I. 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 Department 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.

- J. 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.

- K. 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.)

*Land Use Compatibility  
in Special Studies Zones and Fault Hazard Zones*

Land Uses	Compatibility in Special Studies Zones or County Fault Hazard Zones
<b>Critical</b> Nuclear-related systems; major dams; explosives or hazardous materials manufacturing, handling, or storage; hospitals and other emergency medical facilities	Restricted
<b>Essential</b> Police, fire, and communications systems; Emergency Operations Centers (EOC's); electric power inter-tie systems; power plants; small dams; utility substations; sewage treatment plants; waterworks; local gas and electric distribution lines; aqueducts; major pipelines; major highways; bridges and tunnels; ambulance services; public assembly sites with capacity for 300 or more persons; schools	Restricted
<b>High Occupancy</b> Multi-family residential of 20 or more units; major commercial including large shopping centers; office buildings; large hotels; health care clinics and convalescent homes; heavy industry; gas stations	Generally Unsuitable
<b>Normal-Low Risk</b> Single-family and two-family residential; multi-family of less than 20 units; small scale commercial; small hotels; motels; light industrial; warehousing; parks	Provisionally Suitable

<b>Restricted</b> Restricted unless alternative sites are not available or feasible and it is demonstrated through a site investigation that, although mitigation may be difficult, hazards will be adequately mitigated
<b>Generally Unsuitable</b> Restricted unless site investigation demonstrates that site is suitable or that hazards will be adequately mitigated
<b>Provisionally Suitable</b> Requires site investigation to confirm suitability; may require some modification of facility design or siting



Land Use Compatibility (Special Studies Zones)

# Yucaipa General Plan

prepared by  
J.L. Webb Planning, Inc. 

Table  
**X-2**

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.

L. 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.

M. 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.

N. 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

## Land Use Compatibility in Liquefaction Potential Zones

Degree of Compatibility in Liquefaction Potential Zones			
Land Uses	High Zone	Medium-High Zone	Medium Zone
<b>Critical</b> Nuclear-related systems; major dams; explosives or hazardous materials manufacturing, handling, or storage; hospitals and other emergency medical facilities	Restricted	Restricted	Generally Unsuitable
<b>Essential</b> Police, fire, and communications systems; Emergency Operations Centers (EOC's); electric power inter-tie systems; power plants; small dams; utility substations; sewage treatment plants; waterworks; local gas and electric distribution lines; aqueducts; major pipelines; major highways; bridges and tunnels; ambulance services; public assembly sites with capacity for 300 or more persons; schools	Restricted	Restricted	Generally Unsuitable
<b>High Occupancy</b> Multi-family residential of 20 or more units; major commercial including large shopping centers; office buildings; large hotels; health care clinics and convalescent homes; heavy industry; gas stations	Restricted	Generally Unsuitable	Provisionally Suitable
<b>Normal-Low Risk</b> Single-family and two-family residential; multi-family of less than 20 units; small scale commercial; small hotels; motels; light industrial; warehousing	Restricted	Generally Unsuitable	Provisionally Suitable
<b>Restricted</b> Restricted unless alternative sites are not available or feasible and it is demonstrated through a site investigation that, although mitigation may be difficult, hazards will be adequately mitigated			
<b>Generally Unsuitable</b> Restricted unless site investigation demonstrates that site is suitable or that hazards will be adequately mitigated			
<b>Provisionally Suitable</b> Requires site investigation to confirm suitability; may require some modification of facility design or siting			



## Land Use Compatibility (Liquefaction)

## Land Use Compatibility in Landslide Susceptibility Zones

Land Uses	Degree of Compatibility in Landslide Susceptibility Zones			
	Least Susceptible Zone	Marginally Susceptible Zone	Generally Susceptible Zone	Most Susceptible Zone
<b>Critical</b> Nuclear-related systems; major dams; explosives or hazardous materials manufacturing, handling, or storage; hospitals and other emergency medical facilities	Most Compatible	Marginally Compatible	Least Compatible	Least Compatible
<b>Essential</b> Police, fire, and communications systems; Emergency Operations Centers (EOC's); electric power inter-tie systems; power plants; small dams; utility substations; sewage treatment plants; waterworks; local gas and electric distribution lines; aqueducts; major pipelines; major highways; bridges and tunnels; ambulance services; public assembly sites with capacity for 300 or more persons; schools	Most Compatible	Marginally Compatible	Least Compatible	Least Compatible
<b>High Occupancy</b> Multi-family residential of 20 or more units; major commercial including large shopping centers; office buildings; large hotels; health care clinics and convalescent homes; heavy industry; gas stations	Most Compatible	Generally Compatible	Marginally Compatible	Least Compatible
<b>Normal-Low Risk</b> Single-family and two-family residential; multi-family of less than 20 units; small scale commercial; small hotels; motels; light industrial; warehousing	Most Compatible	Most Compatible	Generally Compatible	Marginally Compatible

<b>Most Compatible</b> Acceptable; however, if specific concerns are identified, a slope stability analysis may be required
<b>Generally Compatible</b> Requires a slope stability analysis to confirm suitability; may require some modification of facility design or siting
<b>Marginally Compatible</b> Restricted unless site investigation demonstrates that site is suitable or that hazards will be adequately mitigated
<b>Least Compatible</b> Restricted unless alternative sites are not available or feasible and it is demonstrated through a slope stability analysis that, although mitigation may be difficult, hazards will be adequately mitigated
<b>Note</b> A slope analysis shall include either a slope stability report by a private consultant or a staff review of slope instability areas shown on Seismic/Geologic Maps or other in-house data, or staff field check. If proposed structures appear to be threatened by moderate or high slope instability, then the project would be conditioned.



## Land Use Compatibility (Landslide Susceptibility)

# Yucaipa General Plan

prepared by  
J.L. Webb Planning, Inc. 

Table

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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.

- O. 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.

- P. 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.

Q. Because the FEMA mapping and studies do not yet identify all flood hazard areas in the entire City, the following 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.

*Land Use Compatibility in 100-Year Floodplains*

Land Uses	Compatibility in 100-Year Floodplains
<b>Critical</b> Nuclear-related systems; explosives or hazardous materials manufacturing, handling, or storage; hospitals and other emergency medical facilities	Restricted
<b>Essential</b> Police, fire, and communications systems; Emergency Operations Centers (EOC's); electric power inter-tie systems; power plants; utility substations; sewage treatment plants; waterworks; local gas and electric distribution lines; aqueducts; major pipelines; major highways; bridges and tunnels; ambulance services; public assembly sites with capacity for 300 or more persons; schools	Restricted
<b>High Occupancy</b> Multi-family residential of 20 or more units; major commercial including large shopping centers; office buildings; large hotels; health care clinics and convalescent homes; heavy industry; gas stations	Generally Incompatible
<b>Normal-Low Risk</b> Single-family and two-family residential; multi-family of less than 20 units; small scale commercial; small hotels; motels; light industrial; warehousing; parks	Generally Incompatible

<b>Restricted</b> Restricted unless alternative sites are not available or feasible and it is demonstrated that, although mitigation may be difficult, hazards will be adequately mitigated
<b>Generally Compatible</b> Restricted unless site investigation demonstrates that site is suitable or that hazards will be adequately mitigated



Land Use Compatibility (100-Year Floodplains)

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.

R. 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**.

S. 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.

T. 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

U. 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.

V. 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.

- W. 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.
- X. Because the proliferation of detention basins is not desirable, safe or economical, the following policies and criteria shall be supported by the City.
- o San Bernardino County Detention Basin Policy.
  - o San Bernardino County Detention Basin Maintenance Financing Policy.
  - o San Bernardino County Detention Basin Submittal Procedures.
  - o Detention Basin Design Criteria for San Bernardino County.
- Y. 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.
- Z. 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 ~~County Forestry-Fire Warden Department~~ 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 ~~Department~~ Division of Building and Safety.
- AA. Because fire exists as a hazard City-wide, 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 ~~County~~ 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 ~~County~~ 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.
- BB. 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.
- o Grading restrictions and/or controls on the basis of soil types, topography or season
  - o Landscaping methods, plant varieties, and revegetation scheduling to achieve optimal revegetation success
  - o Dust-control measures during grading, trucking, and other dust-generating activities

- CC. 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.

**Goal S-2**

Continuously integrate new data on natural and man-made 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.

**Policies**

- A. 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.
- B. 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.
- C. 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 County-wide 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.
- D. 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.
- E. 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.
- F. 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 buildout 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.
- G. Because wind poses a hazard to City land uses, high wind areas shall be mapped as a Hazard Overlay when sufficient data becomes available. State-of-the-art wind

mitigation building standards, including roofing requirements, shall be applied to those areas when mapped. The City shall implement the following actions.

**Actions**

1. Map high wind areas as part of the Hazard Overlay.
2. Map potential wind erosion areas on the basis of soil characteristics for use as a hazard overlay.
3. Adopt design measures for critical, essential, and high occupancy structures to minimize potential wind hazards such as damage to communication, utility, or structural features (e.g., glass facades).
4. Adopt design and/or upgrade measures for facilities identified as susceptible to wind hazards (such as utilities and communications equipment) to minimize potential impacts.

- H. Because specific mapping of erosion-susceptible areas City-wide is difficult to access, maps developed by the Resource Conservation Districts delineating erosion areas shall be adopted by the City. Until such time as maps can be incorporated into the Hazard Overlay, the City Building and Safety official shall evaluate all ministerial and discretionary actions for minimization of erosion hazards.

**Goal S-3** Support and expand disaster response programs, and initiate a program for post-disaster planning.

**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. The City shall actively support and participate in all aspects of the Yucaipa Valley Emergency Services Committee.
- C. Establish comprehensive procedures for post-disaster planning in affected areas.
- D. 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.
- E. 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.
- F. 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 ~~for planned developments of 50 units or more.~~ 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.