

# Multi-Hazard Mitigation Plan

## 4.4 Capability Assessment

Thus far, the planning process has identified the natural hazards posing a threat to the Sutter County Planning Area and described and quantified the vulnerability of the county and incorporated communities to these risks. The next step, prior to forming Goals and Objectives for improving each jurisdiction's ability to reduce the impacts of these risks, is to assess what loss prevention mechanisms are already in place. Doing so provides the "net vulnerability of the Sutter County Planning Area to natural disasters and more accurately focuses the goals, objectives and proposed actions of this plan. This part of the planning process is referred to as the "Capability Assessment."

The HMPC took two approaches in conducting this assessment. First, an inventory of existing policies, regulations and plans was made. These policy and planning documents were collected reviewed to determine if they contributed to reducing hazard related losses, or if they inadvertently contributed to increasing such losses. Second, an inventory of other mitigation activities was made through the use of a matrix. The purpose for this effort was to identify activities and actions beyond policies, regulations and plans that were either in place, needed improvement, or could be undertaken, if deemed appropriate.

A summary of each of these elements is on the pages that follow.

## UNINCORPORATED SUTTER COUNTY

Unincorporated Sutter County has several documents and activities that describe how the county manages development of hazard prone areas. A list of these programs, documents and activities follow, along with a brief summarization of the program status or document contents.

### **General Plan, 1996**

The General Plan is a document that guides the county's future development. It is a blueprint for land use in the county and provides long-term direction for the growth of Sutter County. It is a 15 to 20 year plan for the unincorporated area of the county and expresses broad community values and goals, giving a picture of the desired character and quality of development in the county and policies which outline the steps to accomplish those goals.

The Sutter County General Plan consists of two main documents: The General Plan Background Report and the General Plan Policy Document. The Background Report documents existing and projected conditions within Sutter County and provides the necessary supporting documentation for the General Plan Policy Document. The General Plan Policy Document includes findings that have been brought forward as appropriate from the Background Report, goals, policies and implementation programs. The section that follows identifies those goals, policies, and implementation programs that reflect current mitigation goals and practices for mitigating the risk and vulnerability to natural disasters within the Unincorporated portions of Sutter County.

### **Drainage**

**Goal 3.D:** To collect and dispose of stormwater in a safe and efficient manner.

#### **Policies:**

- 3.D-1: The County shall continue to require that all new development outside the Special Flood Hazard Area as defined by the Federal Emergency Management Agency (FEMA) be protected from a 50 year storm event.
- 3.D-2: The County shall require new development to adequately mitigate increases in storm water flows and/or volume and to avoid cumulative increases in downstream flows.
- 3.D-3: The County shall discourage residential development in areas which are subject to inundation by surface water.
- 3.D-4: The County shall require that new development conforms to the appropriate County requirements and standards governing drainage.
- 3.D-5: The County shall require new development projects to provide adequate drainage facilities.
- 3.D-6: The County shall restrict new development in areas prone to flooding, or that have a seasonal high water table and/or water seepage problems, in order to prevent the contamination of ground and surface water by septic systems.

### **Implementation Programs:**

- 3.9: The County shall study the feasibility and benefits of preparing County-wide or specific area drainage plans that consider both rural and urban drainage needs. (Responsibility: Public Works Department)
- 3.10: The County shall develop and adopt a drainage master plan(s) for the communities of Sutter, Trowbridge and Pleasant Grove. (Responsibility: Public Works Department)
- 3.11 The County shall develop and adopt guidelines which set forth the procedures and standards to achieve a 50 year level of protection from local drainage systems. (Responsibility: Public Works Department, Board of Supervisors)

### **Fire Protection**

**Goal 3.G:** To minimize the risk of personal injury and property damage resulting from fire and provide for emergency medical response when, and to the extent determined appropriate by the governing body.

#### **Policies:**

- 3.G-1: The County shall continue to coordinate operations between fire service agencies to provide optimum protection and utilization of all fire suppression resources.
- 3.G-2: The County will strive to ensure that all proposed development applications are reviewed for compliance with adopted fire safety standards.
- 3.G-3: The County shall continue to promote standardization of operations among fire protection agencies and improvement of fire service levels.
- 3.G-4: The County shall encourage community participation and public education programs relating to fire safety and emergency response. County participation shall be contingent upon the availability of personnel.

### **Water**

**Goal 4.A:** To preserve and protect the water resources of the County

#### **Policies:**

- 4.A-1: The County shall require development setbacks from all water courses.
- 4.A-2: The County shall strive to protect groundwater resources by:
  - Identifying and controlling sources of potential contamination.
  - Protecting groundwater recharge areas.
  - Discouraging overdraft.
  - Encouraging the preparation and implementation of groundwater management plans.
  - Encouraging regional coordination of issues related to the groundwater basins.

- 4.A-3: The County shall encourage water conservation practices, including drought-resistant landscaping, drip irrigation systems and the use of “graywater” for landscaping irrigation.
- 4.A-4: Monitoring of agricultural water runoff should be encouraged to ensure that pollutants are not being returned to the overall water system.

### **Wetland and Riparian Areas**

**Goal 4.B:** To protect wetland and riparian areas throughout Sutter County.

#### **Policies:**

- 4.B-1: The County shall require new development to fully mitigate the loss of federally regulated wetlands to achieve a “no net loss” through any combination of avoidance, minimization, or compensation.
- 4.B-2: The County shall discourage direct discharge of surface runoff into wetland areas. New development shall be designed in such a manner that pollutants and siltation will not significantly affect wetlands.

### **Fish and Wildlife Habitat**

**Goal 4.C:** To protect and enhance habitats that support fish and wildlife species

#### **Policies:**

- 4.C-1: The County shall strive to preserve those areas of wildlife habitat designated "high habitat value" as shown on the biological sensitivity map in Chapter 9 of the Background Report.
- 4.C-2: The County shall encourage preservation and proper management of those areas designated "moderate habitat value" on the biological sensitivity map in Chapter 9 of the background report.
- 4.C-3: The County shall support the preservation and re-establishment of fisheries in the rivers and streams within the County.
- 4.C-4: The County should participate in the process of developing mitigation programs for threatened and endangered species to ensure that Sutter County's agricultural, economic, fiscal, and future urbanization and natural resource goals and policies are met.
- 4.C-5: The County supports the preservation and protection of waterfowl resources and their habitat.
- 4.C-6: The County encourages the preservation of existing wildlife corridors between natural habitat areas to maintain biodiversity and prevent the creation of biological islands. This would also include promoting the re-establishment of previous corridors where feasible.
- 4.C-7: The County encourages the preservation of rare, threatened or endangered animal species.

## **Vegetation**

**Goal 4.D:** To preserve and protect the vegetation resources of Sutter County.

### **Policies:**

- 4.D-1: The County shall encourage the preservation of important areas of natural vegetation, including, but not limited to, oak woodlands, riparian areas, and vernal pools.
- 4.D-2: The County encourages the preservation of rare, threatened, or endangered plant species.
- 4.D-3: The County shall require that new development projects avoid, to the maximum extent possible, ecologically-fragile areas (e.g. areas of rare, threatened or endangered species of plants, riparian areas, vernal pools).
- 4.D-4: The County shall strive to protect major groves of native trees located in the unincorporated areas of the County.
- 4.D-5: The County shall encourage the use of native and drought tolerant plant materials in all public and private revegetation/landscaping projects.

## **Open Space for the Preservation of Natural Resource**

**Goal 4.E:** To conserve, protect and enhance open space lands and natural resources in Sutter County.

## **The Sutter Buttes**

**Goal 4.F:** To preserve the Sutter Buttes and the agricultural uses that the Buttes support.

## **Cultural Resources**

**Goal 5.B:** To identify, protect, and enhance Sutter County's important historical, archeological and cultural sites.

## **General Health and Safety**

**Goal 7.A:** To protect the health and safety of County residents.

### **Policies:**

- 7.A-1: The County shall discourage actions which aggravate or increase the threat to life or property.

## **Seismic and Geologic Hazards**

**Goal 7.B:** To minimize the risk of personal injury and property damage due to seismic and geological hazards.

### **Policies:**

- 7.B-1: Where geologic hazards exist from landslides, the County should designate the land as open space or agriculture.

- 7.B-2: The County may require the preparation of a soils engineering and/or geologic-seismic analysis prior to permitting development in areas of geologic or seismic hazards (i.e., groundshaking, landslides, liquefaction, expansive soils).

**Implementation Program:**

- 7.1: The County shall continue to enforce provisions of the Uniform Building Code which address seismic design criteria (Community Services department).

**Flood Hazards**

**Goal 7.C:** To minimize the risk of personal injury, property damage and the economic and social disruptions associated with floods.

**Policies:**

- 7.C-1: The County shall continue to participate in the Federal Flood Insurance Program.
- 7.C-2: When new development or substantial improvement of existing development occurs within a special flood hazard area, as defined by the Federal Emergency Management Agency (FEMA), the development or improvement shall comply with the County Flood Damage Prevention Regulations.
- 7.C-3: The County shall coordinate efforts with local, regional, state, and federal agencies to maintain the existing levee system to protect life and property from the Intermediate Regional Flood (100 year event).

**Implementation Programs:**

- 7.2: The County shall develop and implement a set of flood damage prevention regulations that will apply to all development and improvement activities within special flood hazard areas of the County (Responsibility: Public Works Department)
- 7.3: The County shall continue to maintain flood hazard maps and other relevant floodplain data and shall revise this information as necessary. (Responsibility: Public Works Department)
- 7.4: The County shall annually review its Dam Evacuation Plan, Slow Rise Flood Threat Plan, and applicable sections of the County Emergency Response Plan. (Responsibility: County Administrator, Community Services Department)

**Fire Hazards**

**Goal 7.D:** To minimize the risk of personal injury and property damage resulting from fire.

**Policies:**

- 7.D-1: The County will submit development proposals, in the unincorporated areas of the County, to the appropriate fire agency.
- 7.D-2: The County shall require that new development, at a minimum, meets state standards for fire protection.

### **Implementation Program:**

- 7.5: The County shall periodically evaluate fire protection services in the County to determine if fire protection resources are being effectively utilized. (Responsibility: Community Services Department)
- 7.6: The County shall submit all amendments to the General Plan to the appropriate fire agencies to identify emerging patterns of development and to obtain feedback from the fire agency as to the potential locations for new fire stations. (Responsibility: Community Services Department)
- 7.7: The County shall update its Fire Codes by implementing the mandatory portions of the most recent state and national standards (UFC, NFC and NFPA). The County shall also review and adopt, as determined appropriate by the County Board of Supervisors to meet the needs and conditions in Sutter County, the discretionary portions of the most recent state and national standards. The governing bodies of separate fire agencies may adopt the County's standards, or may adopt more or less stringent standards as determined appropriate to meet the needs and conditions unique to that agency. (Responsibility: Community Services Department, Board of Supervisors)
- 7.8: The County shall continue to require the installation and maintenance of smoke detection and sprinkler systems in all new structures within the County as required by state law or as determined appropriate by the Board of Supervisors. (Responsibility: Community Services Department)

## **Codes and Ordinances**

### **SUTTER COUNTY ZONING CODE, 2006**

#### **Chapter 15**

#### **Division 60**

#### **Sutter Buttes Overlay Zone**

#### **1500-6010 Purposes:**

The Board of Supervisors finds that the Sutter Buttes constitute a significant historic, cultural, scenic, and geographic feature of the area. Dubbed "the smallest mountain range in the world," the Sutter Buttes rise to over 2,100 feet above sea level and provide the only geographic relief in the otherwise level Sacramento Valley. This range is considered by the Maidu (a Native American people) as the spiritual center from which life originated. (See Sutter County General Plan 2015, Background Report, pp. 8-1 through 8-2.) The Sutter County General Plan recognizes that the visual quality of the natural environment contributes to the overall image of a community. The General Plan requires preservation and protection of such visual and scenic resources. (See Sutter County General Plan 2015, p. 17.) Policies of the Sutter County General Plan mandate that views of the Sutter Buttes be protected. (Sutter County General Plan 2015, p. 17.) Development in certain areas of high or critical visual sensitivities, such as on ridgelines, is particularly damaging to the Sutter Buttes' scenic and cultural qualities. It is therefore in the best interest of the residents of Sutter County, in preserving the cultural, historic, geologic, and visual values of the Sutter Buttes, that specific development standards be applied in the Sutter Buttes.

**Chapter 15**  
**Division 79**  
**Special Flood Plain Combining District (fp)**

**1500-7910 Purpose:**

To provide for the welfare of county residents by identifying those lands within Sutter County that are not protected by flood control systems and are subject to flood hazards and/or seasonal inundation that limit(s) the practical uses of the property otherwise permitted within the primary district with which the “FP” District is combined. In any such district , the regulations of Section 1500-7912 shall apply in addition to those specified for such district, provided that if conflict in regulations occurs, the regulations of Section 1500-7912 shall govern. 1500-7912 Special Provisions:

(a) No residential buildings shall be permitted on ground lower than one (1) foot above the elevation specified on the zoning map of the particular district or on the Federal Emergency Management Agency’s Flood Zone Map for 100 year storm protection.

(b) Recreational, commercial and industrial buildings and structures related directly to the harvesting and storage of agricultural products grown in the district or related to the storage or loading of agricultural or sand and gravel products for transshipment by waterborne conveyance, and heights for such buildings and structures in excess of those allowed by the base zoning district with which the FP District is combined, may be permitted upon the approval of a use permit.

**Chapter 1530**  
**Flood Damage Prevention Ordinance**  
**Division**

**Subdivision Ordinance: Section 1400**  
**1400-500 Standards and Requirements for Subdivisions**

**1400-560 Water Courses.** The subdivider shall dedicate right-of-way for storm drainage conforming substantially with the lines of any natural water course that traverses the subdivision, or at the option of the Planning Commission, the subdivider shall provide by dedication further and sufficient easements or constructions or both, to dispose of such surface and storm water.

**County of Sutter**  
**Department of Public Works**  
**Design Standards, 2006**

**Section 5**  
**Storm Drainage Design**

**5-1 Drainage Policy**

It is the policy of Sutter County to protect all new habitable structures from the 100-year (1%) flood event. It is the policy of Sutter County to protect two lanes of travel in each direction for arterial roadways from the 100-year (1%) flood event and one lane in each direction for all other public roads from the 10-year (10%) flood event.

#### **5-4 National Flood Insurance Program**

The County of Sutter is a participant in the National Flood Insurance Program, and all development in the County shall comply with the County of Sutter Flood Damage Prevention Ordinance. Amendments of the National Flood Insurance Program Flood Insurance Rate Maps may be required for developments located in a federal flood zone. Petitions for a Letter of Map Amendment (L.O.M.A.) or Letter of Map revision (L.O.M.R.), including any fee required by Federal Emergency Management Agency (F.E.M.A.), shall be submitted to the Public Works Department prior to approval of a tentative map or approval of improvement plans.

#### **5-5 Drainage Capacity Design**

All drainage systems shall be designed to accommodate the ultimate development of the entire upstream watershed.

#### **5-6 Surface Drainage Grading Design**

The engineer shall be responsible for designing a grading plan which ensures storm waters from a 100 year design storm flow through a development without flooding structures.

### **Services/Groups**

#### **Law Enforcement**

Law enforcement in Sutter County is provided by two principal separate agencies, the Sutter County Sheriff and the California Highway Patrol.

#### **Sutter County Sheriff**

The Sutter County Sheriff's Department (SCSD) is responsible for crime prevention, law enforcement, and criminal investigation in the unincorporated areas of the County and the City of Live Oak. The SCSD has its main office at the Law Enforcement Center in Yuba City, with resident deputies in Meridian, Robbins, and Pleasant Grove. The existing County jail is also located at the Law Enforcement Center.

The SCSD maintains close working relationships with other law enforcement agencies in the area and has mutual aid agreements with the California Highway Patrol, the Yuba City Police Department, the Yuba County Sheriff Department and the Marysville Police Department.

#### **The California Highway Patrol (CHP)**

The California Highway Patrol is the primary law enforcement agency for State highways and roads in the unincorporated areas of the County. Services include law enforcement, traffic control, accident investigation and management of hazardous materials spill incidents. The CHP maintains an office in Yuba City.

#### **Fire Protection**

Fire Services in Sutter County are provided through an organization of three County Service Areas and three Fire Protection Districts

Sutter County Fire Services coordinates fire protection for County Service Areas C, D, and F in the unincorporated portion of Sutter County covering approximately 360 square miles and provides fire service to the City of Live Oak through a contractual agreement. These County Service Areas maintain eight fire stations.

The Meridian Fire Protection District, with one station, covers approximately 127 square miles.. The Sutter Basin Fire Protection District, with three stations, covers approximately 127 square miles. The Walton Fire Protection District covers approximately 24 square miles.



## Gas and Electric

Pacific Gas and Electric (PG&E) provides electrical and natural gas service to Sutter County. Electrical service is provided to all areas of the County. Natural gas is provided only to the urbanized areas of Yuba City and Live Oak and to the community of Nicolaus. Most of the electrical service in the County is carried through above-ground lines. New urban development is now typically served by underground services.

## **Special Districts**

Sutter County currently has 54 special districts that provide various public services for areas within their respective service areas. These include Water Districts (7), Community Services Districts (4), County Drainage Districts (4), County Service Areas (4), Protection Districts (3), Mosquito Abatement Districts (2), Public Cemetery Districts (6), Reclamation Districts (15), Levee Districts (2), and Miscellaneous Districts (6).

## **Agricultural Department**

The County Agricultural Commissioner is responsible for the local administration of statewide agricultural enforcement programs which protect the agricultural industry and the environment of Sutter County and protects the public health and welfare of its citizens. The Agricultural Commissioner is also the County Sealer of Weights and Measures and the Director of Underground Storage of Hazardous Materials.

## **Building Inspection Services**

The Building Program is responsible for enforcement of the building, mechanical, electrical, and plumbing codes adopted by the County as control measures for public safety. The Program checks plans, issues construction permits, inspects buildings and structures at all stages of construction along with alterations and repairs for safety and conformity with State and local codes.

## **Emergency Services**

The Emergency Services Program is responsible for planning, response and recovery activities associated with natural and man-made emergencies and disasters throughout the County and coordination of those activities with Local Agencies, State OES (Office of Emergency Services) and the Federal Emergency Management Agency (FEMA).

## **Sutter County Resource Conservation District**

Formed in 1955, the Sutter County Resource Conservation District covers 363,556 of the 386,425 acres in Sutter County. Recent catastrophic flooding in the Sutter Basin and the real potential of severe flooding from future levee breaks along the Feather or Sacramento Rivers or by-pass levees are of a key issue for the district. The District supports strong measures to strengthen the levees, dredge the river channels and other flood control measures to avoid further death and destruction.

## **Community Plans/Programs/Projects**

The County also has many planned and ongoing studies and projects focused on minimizing future losses associated with identified hazards. Many of these projects are sponsored and implemented by one or more County departments and/or other state and local agencies and organizations. Key plans, studies and projects of interest include:

## **County of Sutter, Emergency Operations Plan, Sutter Operational Area**

The Sutter County Emergency Operations Plan (EOP) addresses the planned response to emergency situations associated with natural disasters, technological incidents, and national security emergencies in or affecting Sutter County. The EOP was developed to provide a comprehensive (multi-use) emergency management program for Sutter County.

### **Lower and Upper Feather River Flood Insurance Study (LFRS and UFRS)**

These two studies being conducted by the DWR and FEMA will ultimately identify current flood risks and define the floodplains within the County.

#### **Lower Feather River Study**

The Amended Draft of the Lower Feather River Floodplain Mapping Study, Revised February 17, 2005 (LFR Study), prepared by the U.S. Army Corps of Engineers (USACE) Sacramento District, was conducted, in part, to support the DFRIM mapping efforts within the Sutter County Planning Area. Generally, the LFR Study addresses flooding from the Feather River downstream of the Yuba River confluence to the mouth of the Feather River at the Sacramento River. It also addresses flooding from the Bear River downstream of Highway 65 and several tributaries to the Bear River. New hydrologic data and hydraulic models were developed as part of this study.

The LFR study was performed in compliance with current FEMA technical guidelines requiring certification of levees before crediting the levees with providing protection from the 1% annual event. FEMA levee certification requirements include evaluations of freeboard, geotechnical stability and seepage, bank erosion potential due to currents and waves, closure structures, operations and maintenance, and wind set and wave run-up. The LFR Study based on its assessment on only three of these requirements (i.e., freeboard, geotechnical stability and seepage, and bank erosion) concluded that the LFR Study does not result in the certification of any levees within the study area. As a result of this finding, the new DFIRMs developed from this LFR study do not recognize the levees as providing 100-year flood protection.

#### **Upper Feather River Study (UFR Study)**

Similar in scope to the LFR Study, the Upper Feather River Study will cover the portions of the Sutter County Planning Area, not included in the LFR Study. It is anticipated that the UFR Study will reach the same conclusions with respect the inability to certify the levees within that study area resulting in new DFIRMs that do not recognize the levees as providing 100-year flood protection. The UFR study and new DFIRMs are anticipated to be out in draft form sometime in 2007.

#### **Sutter County Feasibility Study**

The Corps of Engineers is conducting a reconnaissance study of levee improvement measures for existing levee systems and additional areas of flood protection for the Sutter Basin in California. The primary objective of the study is to restore the area to a 100-year level of protection (Phase I) and then increase it to a 200-year level of protection (Phase II). To date, 24 preliminary

alternatives were developed from the flood damage reduction management, ecosystem restoration, and recreation measures.

### **The Natural Community Conservation Planning (NCCP)**

The NCCP, a program of the California Department of Fish and Game, is an unprecedented effort by the State of California, and numerous private and public partners, that takes a broad-based ecosystem approach to planning for the protection and perpetuation of biological diversity. An NCCP identifies and provides for the regional or area wide protection of plants, animals, and their habitats, while allowing compatible and appropriate economic activity. Sutter & Yuba counties, Caltrans, US Fish & Wildlife, CA Dept of Fish & Game, Jones & Stokes and scientists are all working together proactively, respectfully and effectively with our communities on this project.

### **Natomas Basin Habitat Conservation Plan (NBHCP)**

The NBHCP applies to the 53,341-acre interior of the Natomas Basin, located in the northern portion of Sacramento County and the southern portion of Sutter County. The purpose of the NBHCP is to promote biological conservation along with economic development and the continuation of agriculture within the Natomas Basin. The NBHCP establishes a multi-species conservation program to mitigate the expected loss of habitat values and incidental take of protected species that would result from urban development, operation of irrigation and drainage systems, and rice farming. The goal of the NBHCP is to preserve, restore, and enhance habitat values found in the Natomas Basin while allowing urban development to proceed according to local land use plans.

## **FEDERAL AND STATE CONSIDERATIONS**

There are some regional capabilities that should also be considered, and an additional layer of regulations at the state and federal level enhance these local capabilities. These include the following:

### **The United States Army Corps of Engineers (USACE)**

The USACE has authority pursuant to the Rivers and Harbors Act. Under their authority, they maintain jurisdiction over all navigable waterways (including non-navigable streams, creeks, marshes, and diked lands) and requires a permit for any work within these waterways.

### **The United States Fish and Wildlife Service (USFS)**

The USFS must be consulted on all federal projects pursuant to the Fish and Wildlife Coordination Act. The Agency comments on potential project effects on endangered or threatened plant and animal species under the Federal Endangered Species Act. In Sutter County, the USFS is the primary federal land owner. The USFS manages the Sutter National Wildlife Refuge (2,467 acres)

## **The State Department of Fish and Game (DFG)**

DFG has jurisdiction over all water of the state, including any lakes, streams or rivers containing fish or wildlife resources, such as the Sacramento Feather and Bear Rivers in Sutter County, as well as all natural streams, creeks and drainageways leading to these rivers. The DFG has also claimed authority over other local drainage facilities. DFG permitting authority includes permitting for streambed alteration agreements required for any project that alters the flow of any lake, stream or river on the state; and for suction dredging permits required for projects involving suction or vacuum dredging activities in state waters. In Sutter County, the DFG also operates the Gray Lodge Waterfowl Management Area, several units of the Feather River Management Area, and other properties in the County for the management of wildlife. The department also reviews projects and comments on potential impacts to fish and wildlife resources in general.

## **The State Department of Water Resources (DWR)**

DWR built and operates the State Water Project which delivers half of the water supply as far south as Riverside County. The DWR also coordinates CEQA and NEPA comments for many departments of the State Resources Agency. Some of the DWR's original duties have been turned over to the State Department of Fish and Game and the State Department of Parks and Recreation. These agencies cooperate with DWR as subcontractors for specialized services, in the provision of fish, wildlife, and habitat management, and recreational operations and enhancement.

## **The State Reclamation Board**

The State Reclamation Board maintains jurisdiction over all Federal Flood Control Projects and levees that are either part of such a project or that may affect such a project. The Reclamation Board is authorized to grant encroachment permits for any activity proposed along or near flood control levees, including changes in land use, construction, earthwork, or removal of vegetation.

## **The State Department of Parks and Recreation**

The State Department of Parks and Recreation reviews development projects in relation to state recreational facilities and grants for local facilities. Within the Department of Parks and Recreation, the State Office of Historic Preservation is the designated State Historic Preservation Office (SHPO) and monitors State and Federally registered historic resources, as well as carrying out other statutory responsibilities.

## **California State Dam Safety Program**

The California Water Code entrusts the regulatory Dam Safety Program to the Department of Water Resources through the Division of Safety of Dams. The principal goal of this program is to avoid dam failure and thus prevent loss of life and destruction of property. Dams under State jurisdiction are an essential element of the California infrastructure that provides constant water supply integrity.

Dams under State jurisdiction are artificial barriers, together with appurtenant works, which are 25 feet or more in height or have an impounding capacity of 50 acre-feet or more. Any artificial barrier not in excess of six feet in height, regardless of storage capacity, or that has a storage capacity not in excess of 15 acre-feet, regardless of height, is not considered jurisdictional.

The statutes governing dam safety in California (Division 3 of the Water Code), place the supervision of the safety of non-federal dams and reservoirs under the jurisdiction of the Department of Water Resources' Division of Safety of Dams.

## **California State Building Code**

The California Code of Regulations (CCR), Title 24, also known as the California Building Standards Code (CBSC), is based on the UBC 1997 Building Code, as amended, and has 11 parts. The California Building Standards Code is a compilation of three types of building standards from three different origins:

- Building standards that have been adopted by state agencies without change from building standards contained in national model codes
- Building standards that have been adopted and adapted from the national model code standards to meet California conditions and
- Building standards, authorized by the California legislature, that constitute extensive additions not covered by the model codes that have been adopted to address particular California concerns.

The national model code standards adopted into Title 24 apply to all occupancies in California except for modifications adopted by state agencies and local governing bodies. Included in the code are provisions for:

- Flood Resistant Construction
- Life-Safety Requirements for Existing Buildings Other than High-rise Buildings
- Life-Safety Requirements for Existing High-rise Buildings and
- Repair to Building and Structures Damaged by the Occurrence of a Natural Disaster.

Standard building codes provide new construction with protection against known or expected forces and include wind, seismic, fire and snow-load/ice considerations. As a practice, standard building codes include a factor of safety of up to 1.3, meaning that structures constructed in a professional manner should be able to withstand forces up to 30 percent greater than what is suggested. (Source: [www.bsc.ca.gov](http://www.bsc.ca.gov))

## **California Unreinforced Masonry Program**

Unreinforced masonry buildings (URMs), are generally brick buildings constructed prior to 1933, predating modern earthquake-resistant design. The brick is not strengthened with embedded steel bars and is therefore called unreinforced. The “URM Law” is SB 547, passed in 1986 and is section 8875 of the California Code. The State Building Code includes a map that identifies areas subject to seismic risk through Zones of increasing risk, from Zone I to Zone IV, with IV having the highest risk. URM buildings in UBC Seismic Zone IV must be inventoried and retrofitted in every jurisdiction. The communities are to adopt a loss reduction program,

and to report progress to the Seismic Safety Commission (SSC). The 2003 SSC report discusses the relative effectiveness of mandatory, voluntary, and ‘notification only’ programs. (Source: [www.quake06.org/quake06/best\\_practices](http://www.quake06.org/quake06/best_practices))

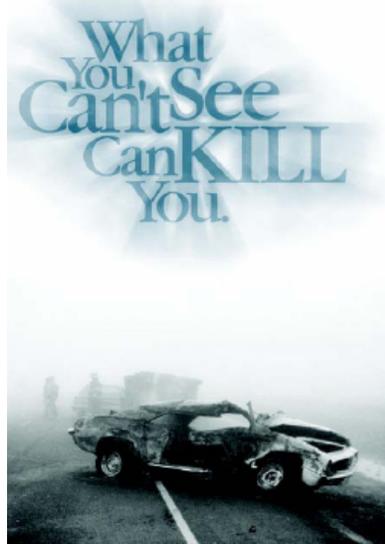
### **California Department of Transportation - Caltrans**

Caltrans is working in conjunction with CHP on the California Operation Fog Program. Caltrans is utilizing current technology such as changeable message signs, visibility sensors, and visibility signs.

CALTRANS information network: 1-800-427-ROAD.

### **California Highway Patrol: California’s Operation Fog Program.**

CHP and Caltrans has a public information brochure on fog hazards located online at [http://www.dot.ca.gov/dist6/docs/fog/fogbrochure\\_english.pdf](http://www.dot.ca.gov/dist6/docs/fog/fogbrochure_english.pdf)



When visibility is reduced to less than 500 ft., the California Highway Patrol implements their “PACE CAR” program. The CHP escorts traffic through dense fog when needed. Officers utilize their flashing lights to lead vehicles at a safe pace through areas of heavy traffic. Keeping traffic speeds at a reduced and consistent pace during these conditions will minimize accidents and maximize safe travel.

### **California Office of Emergency Services**

#### **Hazard Mitigation Section**

The Hazard Mitigation Section is responsible for administering the Hazard Mitigation Grant Program (HMGP) and Pre-Disaster Mitigation Grant Program (PDM). The PDM program is a federally funded competitive grant program established to mitigate risks to facilities and infrastructure from future disasters. The Hazard Mitigation Section is also responsible for the development and implementation of the program which integrates both pre- and post-disaster risk management. It includes disaster prevention, hazard mitigation, hazards assessment, and vulnerability studies. The section also manages the disaster preparedness improvement grant.

**Regional support**

The State of California is partitioned into three administrative regions. Sutter County lies in the Inland administrative region. The Inland region south office is located in Fresno. Each of the three OES regions is modeled after the larger organization and includes the full complement of support programs. A primary goal of this organization is to place more emphasis on regional support of local government. The regional branches are responsible for providing planning and technical assistance to state and local agencies within their respective areas. The programs provide support to local government, schools, businesses, and the public through outreach, education, earthquake hazard mitigation, and preparedness activities. The regions are also responsible for assisting in the coordination of mutual aid, delivery of disaster assistance and training programs, and the overall management of regional emergency response activities.

## LOCAL GOVERNMENT CAPABILITY MATRIX

In addition to the assessment of community policies, regulations and plans, the HMPC also created a matrix as a way of taking inventory of additional mitigation capabilities in each community. The intent of this effort was to see if there were any similarities or gaps in community programs and tools that might indicate where some improvements could be made. The matrix and the key to the matrix labels are located on the following pages.

<b>Capability</b>	<b>Sutter County</b>	<b>City of Yuba City</b>	<b>City of Live Oak</b>
Comprehensive Plan	1995 General Plan	2004 General Plan & Area Plans	1994 General Plan update in 2007
Land Use Plan	Included in General Plan	Included in 2004 General Plan	Included in General Plan
Subdivision Ordinance	Local Ordinance & CA Map Act	Local Ordinance & CA Map Act	Local Ordinance & CA Map Act
Zoning Ordinance	Yes	Yes	Yes, very low density
Floodplain Management Ordinance	Yes	Yes	Yes
Effective Flood Insurance Rate Map Date	July 6, 1998, with revised preliminary date August 9, 2006	March 22, 1984; revised preliminary maps issued August, 2006	March 23, 1984
Substantial Damage Language	Yes, but no "substantial improvement" language	Yes	Yes
Certified Floodplain Manager	No	No	No
Number of Floodprone Buildings	>200	<5	Estimate 50
Number of NFIP policies	4,292 (as of 9/12/06)	2,753 (as of 8/21/06)	103 (as of 9/12/06)
Maintain Elevation Certificates	Yes	Yes	No
Number of Repetitive Losses	10	0	1
CRS Rating	Class 10	Class 10	Class 10
Stormwater Program	Master Plan in cooperation with Yuba City	Ordinance under development	Yes
Building Code Version Full-time Building Official	State Building Code Yes	State Building Code, Yes (position vacant 8/23/06)	State Building Code, Yes
Conduct "As-built" Inspections	Yes	Yes	Yes
BCEGS Rating	3/3		
Emergency Operations Plan	Yes, in draft form	Yes, currently revising 2002 plan	Under development
Hazard Mitigation Plan	Under development	Under development	Under development
Warning Systems in Place	Siren system in Robins	Yes; Teleminder System, AM Radio Advisory System, Cable Override, Trailer-mounted message board	
Storm Ready Certified	No	No	No
Weather Radio Reception	Yes	Yes	Yes
Outdoor Warning Sirens	Yes, for Robins only	No	No

<b>Capability</b>	<b>Sutter County</b>	<b>City of Yuba City</b>	<b>City of Live Oak</b>
Emergency Notification (R-911)	No, County relies on Yuba City's teleminer system	Yes	
other (e.g., cable override)	5 river gages, web site alerts, cable override, DMIS, EDIS	Cable override in valley, City Hall weather station link to web, storm gages on river, highway advisory radio	Storm stations, SCADA, radio data transmission and acquisition
GIS system	Yes	Yes	Yes
Hazard Data	Yes, historical flood damage and levee damage/repair, FEMA SFHAs (current and preliminary)	Water sources, storm drains, LIDAR	FEMA SFHAs, infrastructure, right of ways
Building footprints	No	Not at present	No
Tied to Assessor data	Yes	Yes	Yes
Land Use designations	Land use and zoning	Zoning and General Plan	Yes, zoning
Structural Protection Projects	\$55M in levee projects since 1998	Levee maintenance/upgrades; Improvements to Gilsizer drainage systems	Levee maintenance/upgrades
Property Owner Protection Projects	Sporadic residential protection projects	Levee District 1 review system for proposed development	Shallow wells for irrigation
Critical Facilities Protected	Berm/floodwall for county building, berm at Pleasant Grove School, in house publication and training for all county employees in conjunction with Human Resources Dept, emergency command post on high ground	Yes; emergency generators, command center relocation capability, evacuation drills with assembly points, red-tagging system for document & equipment evacuation	Community Services building and Dept of Public Works elevated
Natural Resources Inventory	Yes, soils, endangered species habitat (flora and fauna), open space	Yes, General Plan Natural Resource listing	Not at present; plans to develop inventory with General Plan updates
Cultural Resources Inventory	Yes, Historic resources	Yes, General Plan Historic Structures listing	Yes, Historic Resources
Erosion Control Procedures	Yes, through NPDES approved ordinances	Partial, Levee Board has procedures for new development	Yes, for new development
Sediment Control Procedures	Yes, through NPDES approved ordinances	Master Drainage Plan and Levee Board procedures for new development	Yes, for new development
Public Information	Several joint projects with	Yes; mailed with utility	Web site under

<b>Capability</b>	<b>Sutter County</b>	<b>City of Yuba City</b>	<b>City of Live Oak</b>
Program/Outlet	Yuba City, recovery/preparedness pamphlet for business owners, flip chart on flood preparedness, dam safety/river gage evacuation information, newspaper information, public hearings/notices	bills, special publications by Fire Dept, storm drain fliers, monthly city newsletter, water quality reports, web site, cable company public notices from Police Dept	development
Environmental Education Program	Annual contractor training and special requirements for certification, Flood forecasting briefs with NWS and DWR	Yes; storm drain outreach materials, river awareness materials	Yes, Water conservation brochures, handouts

## EXPLANATION OF CAPABILITY ASSESSMENT MATRIX

**Comp Plan:** Comprehensive Long-Term Community Growth Plan

**Land Use Plan:** Designates type of Land Use desired/required – Comprised of Zoning

**Subdivision Ordinance:** Dictates lot sizes, density, setbacks, and construction type.

**Zoning Ordinance:** Dictates type of Use and Occupancy, Implements Land Use Plan

**NFIP/FPM Ord:** Floodplain Management Ordinance: Directs development in identified Flood Hazard Areas. Required for Participation in NFIP and Availability of Flood Insurance

**Sub. Damage:** Does your FPM Ordinance contain language on Substantial Damage/Improvements? (50% rule)

**Administrator:** Do you have a Floodplain Management Administrator (someone with the responsibility of enforcing the ordinance and providing ancillary services (map reading, public education on floods, etc.)

**# of FP Bldgs:** How many buildings are in the Floodplain?

**# of policies?:** How many buildings are insured against flood through the NFIP?

**# of RL's:** # of Repetitive Losses: Paid more than \$1,000, twice in the past 10 years

**CRS Rating:** Are you in the Community Rating System of the NFIP, and if so, what's your rating?

**BCEGS:** Building Code Effectiveness Grading System Rating

**LEOP:** Do you have a Local Emergency Operations Plan – a Disaster RESPONSE Plan?

**HM Plan:** Do you have a Hazard Mitigation Plan?

**Warning:** Do you have any type of system, such as “Storm Ready” Certification from the National Weather Service, NOAA Weather Radio reception, Sirens, Cable (TV) Override, “Reverse 911”?

**GIS:** Geographic Information System

**Structural Protection Projects:** Levees, drainage facilities, detention/retention basins

**Property Protection Projects:** Buy-outs, elevation of structures, floodproofing, small "residential" levees or berms/floodwalls

**Critical Facility Protection:** For example, protection of power substations, sewage lift stations, water-supply sources, the EOC, police/fire stations, medical facilities that are at risk, e.g., in the floodplain.

**Natural And Cultural Inventory:** Do you have an inventory of resources, maps, or special regulations within the community? (wetlands and historic structures/districts, etc.)

**Erosion Or Sediment Control:** Do you have any projects or regulations in place?

**Public Information And/Or Environmental Education Program:** Do you have an ongoing program even if its primary focus is not hazards? Examples would be "regular" flyers included in city utility billings, a website, or an environmental education program for kids in conjunction with Parks & Recreation?

## CITY OF YUBA CITY

The City of Yuba City has several documents and activities that describe how the City manages development of hazard prone areas. A list of these programs, documents and activities follow, along with a brief summarization of the program status or document contents.

### **General Plan Update, 2004**

The General Plan is a document that guides the City's future development. It is a blueprint for land use in the City and provides long-term direction for the growth of the City. It is a 15 to 20 year plan for the unincorporated area of the City and expresses broad community values and goals, giving a picture of the desired character and quality of development in the City and policies which outline the steps to accomplish those goals.

The City of Yuba City General Plan Update includes the seven elements required by State Law (Land Use, Housing, Circulation, Open Space, Conservation, Safety, and Noise) and four other elements that address local concerns (Growth & Economic Development, Community Design, Public Utilities, and Parks, Schools and Community Facilities). Each chapter includes brief background information and recommended policies stating the City's goals, philosophy, and implementation measures. The section that follows identifies those both guiding policies, and implementation policies that reflect current mitigation goals and practices for mitigating the risk and vulnerability to natural disasters within the City.

### **Water Supply**

#### **Guiding Policies:**

- 7.1-G-1: Ensure that an adequate supply of water is available to serve existing and future needs of the City.
- 7.1-G-2: Ensure that necessary water supply infrastructure and storage facilities are in place prior to construction of new development.
- 7.1-G-4: Encourage water conservation with incentives for decreased water use and active public education programs.

#### **Implementing Policies**

- 7.1-I-1 Evaluate the adequacy of water infrastructure in areas where intensification of land use is anticipated to occur, and develop a strategy to implement projects in the Water Supply Master Plan to offset deficiencies in capacity.
- 7.1-I-2 Coordinate capital improvements planning for all municipal water service infrastructure with the direction, extent, and timing of growth.
- 7.1-I-3 Decline requests for extension of water beyond the SOI, except in cases of existing documented health hazards and in areas where the City has agreements to provide services.
- 7.1-I-4 Establish equitable methods for distributing costs associated with providing water service to development, including impact mitigation fees where warranted.
- 7.1-I-5 Explore ways to encourage use of reclaimed water for irrigation and landscaping purposes. Utilizing reclaimed water is currently not cost-effective. Should the costs of

reclaimed water become more attractive, the City should define a program for encouraging reclaimed water use.

- 7.1-I-6 Establish guidelines and standards for water conservation and actively promote use of water-conserving devices and practices in both new construction and major alterations and additions to existing buildings.

## **Historic and Archaeological Resources**

### **Guiding Policy**

- 8.3-G-1 Identify and preserve the archaeological, paleontological, and historic resources that are found within the Yuba City Planning Area.

## **Biological Resources**

### **Special Status Species & Habitats**

#### **Guiding Policies**

- 8.4-G-1: Protect special status species, in accordance with State regulatory requirements.
- 8.4-G-2: Protect and enhance the natural habitat features of the Feather River and new open space corridors within and around the urban growth area.
- 8.4-G-3: Preserve and enhance heritage oaks in the Planning Area.

#### **Implementing Policies**

- 8.4-I-1: Require protection of sensitive habitat areas and special status species in new development site designs in the following order: 1) avoidance; 2) onsite mitigation, and 3) offsite mitigation. Require assessments of biological resources prior to approval of any development within 300 feet of any creeks, sensitive habitat areas, or areas of potential sensitive status species.
- 8.4-I-2: Require preservation of oak trees and other native trees that are of a significant size, by requiring site designs to incorporate these trees to the maximum extent feasible.
- 8.4-I-3: Require, to the extent feasible, use of drought tolerant plants in landscaping for new development, including private and public projects.
- 8.4-I-4: Require measures, as part of the Feather River Parkway Plan, to protect and enhance riparian zones, natural areas and wildlife habitat qualities; and establish and maintain a protection zone along the river where development shall not occur, except as part of the parkway enhancement (e.g., trails and bikeways). For park improvements, require a buffer zone along the river in which no grading or construction activities will occur, except as needed for shoreline uses such as boat docks.

## **Seismic and Geologic Hazards**

### **Guiding Policy**

- 9.2-G-1: Minimize risks of property damage and personal injury posed by geologic and seismic hazards.

## Implementing Policies

- 9.2-I-1: Review proposed development sites at the earliest stage of the planning process to locate any potential geologic or seismic hazards. Following receipt of a development proposal, engineering staff shall review the plans to determine whether a geotechnical review is required. If the review is required, then the applicant shall be referred to geotechnical experts for further evaluation.
- 9.2-I-2: Prohibit structures intended for human occupancy within 50 feet of an active fault trace. Although no active faults are located within the Planning Area, this policy would apply if a new fault was discovered. It is also the City's intent to discourage homes, offices, hospitals, public buildings, and other similar structures over the trace of an inactive fault and to allow uses within setback areas that could experience displacement without undue risk to people and property.
- 9.2-I-3: Require comprehensive geologic and engineering studies of critical structures regardless of location. Critical structures are those most needed following a disaster or those that could pose hazards of their own if damaged. They include utility centers and substations, water reservoirs, hospitals, fire stations, police and emergency communications facilities, and bridges and overpasses.
- 9.2-I-4: Require preparation of a soils report as part of the development review and/or building permit process for development proposed in the area depicted with expansive soils. The southwest corner of the City is underlain by expansive soils that must be taken into account during building design if cracking and settling of structures are to be minimized. The report would not be necessary when soil characteristics are known, and the City's Building Official or Public Works Director determines it is not needed.
- 9.2-I-5: Provide information for property owners to rehabilitate existing buildings using construction techniques to protect against seismic hazards. The City-adopted Uniform Building Code specifies seismic standards for new construction, as well as for additions or expansions to buildings. It is in the community's best interest to do all that is necessary to ensure that all structures meet current seismic standards.
- 9.2-I-6: Control erosion of graded areas with revegetation or other acceptable methods. Plant materials for revegetation should not be limited to hydro-seeding and mulching with annual grasses. Trees add structure to the soil and take up moisture while adding color and diversity.
- 9.2-I-7: Maintain and update, as appropriate, the City's emergency preparedness programs, plans, and procedures to ensure the health and safety of the community in the event of an earthquake or other disaster. The City shall inform community and business leaders and residents regarding all aspects of disaster preparedness, including plans for evacuation and alternative access routes and provisions. The City shall also provide a coordinated emergency response in the event of any local or regional, natural or man-made disaster. This shall be supported by ongoing awareness and training programs in disaster planning and response.
- 9.2-I-8: Encourage the purchase of earthquake insurance. Earthquake insurance provides a public benefit in that financial aid is often provided swiftly, allowing repair and rebuilding to proceed quickly and uniformly across the City.

## **Drainage, Stormwater, and Flooding**

### **Guiding Policies**

- 9.3-G-1: Protect the community from risks to lives and property posed by flooding and stormwater runoff.
- 9.3-G-2: Collect and dispose of storm water in a safe and efficient manner.
- 9.3-G-3: Ensure that dams and levees are properly maintained for long-term flood protection.

### **Implementing Policies**

- 9.3-I-1: Implement the drainage improvements identified in the City's Capital Improvement Program.
- 9.3-I-2: Continue to work with the U.S. Army Corps of Engineers to implement levee improvements on the Feather River. Incorporate features in the levee system to ensure flood protection and at the same time improve the connection between the city and the river.
- 9.3-I-3: When necessary, require new development to prepare hydrologic studies to assess storm runoff impacts on the local and subregional storm drainage systems and, if warranted, require new development to provide adequate drainage facilities and to mitigate increases in storm water flows and/or volume to avoid cumulative increases in downstream flows. Developers shall provide an assessment of a project's potential impacts on the local and subregional storm drainage systems, so that the City can determine appropriate mitigation to ensure that system capacity and peak flow restrictions are not exceeded.
- 9.3-I-4: Restrict new development in areas subject to 100 year flooding, as shown in Figure 9-6 of the General Plan.
- 9.3-I-5: Provide information to property owners about the availability of flood insurance. This policy can be implemented with counter handouts and stories in the City's newsletter and pages on the City's website.
- 9.3-I-6: As new development occurs, work with Sutter County to establish drainage areas that serve the entire Planning Area. A new drainage study may be appropriate to determine the best means to establish drainage areas that would safely channel runoff and provide protection from flooding.
- 9.3-I-7: Utilize parks for the secondary purpose of storm water storage.

## **Emergency Response**

### **Guiding Policies**

- 9.4-G-1: Ensure continued adequate law enforcement capabilities.
- 9.4-G-2: Minimize the risk of personal injury, property damage, and environmental damage from fire, hazardous chemicals releases, natural and human made disasters.
- 9.4-G-3: Maintain current police and fire response times and staffing ratios.

## **Implementing Policies**

- 9.4-I-1: Maintain the Fire Department performance objectives and response standards set forth in Table 9-6 of the General Plan.
- 9.4-I-2: Prepare and disseminate information, including a page on the City's website, about emergency preparedness. This information should describe how emergency response will be coordinated and where residents can obtain emergency information.
- 9.4-I-3: Conduct periodic emergency management exercises with City personnel and surrounding jurisdictions.
- 9.4-I-4: Require adequate access for emergency vehicles, including adequate street width and vertical clearance on new streets.
- 9.4-I-5: Continue implementation of the City Sprinkler Ordinance throughout the Planning Area.
- 9.4-I-6: Review proposed development applications for compliance with adopted fire safety standards and staffing ratios. Construction of a new fire station in the southwest section of the City will be required to maintain standards. Construction of this facility will take place in conjunction with new development in the southwest area.
- 9.4-I-7: Continue to conduct building and fire code enforcement to ensure safe structures. The City has an active program for both building and fire code enforcement. The program is delivered by building inspectors, fire inspectors and code enforcement officer(s).
- 9.4-I-8: Extend water distribution pipes, as needed, to maintain and improve fire water flows.
- 9.4-I-9: Support community training and volunteer programs to enhance emergency preparedness.

## **Housing Element**

Environmental phenomena such as flooding and seismicity present a minor constant risk to Yuba City, but are not considered constraints to housing development. Nowhere in the City is development precluded; environmental constraints can be mitigated through appropriate residential design.

## **Codes and Ordinances**

### **Chapter 9. Flood Damage Prevention**

#### **Article 1. Authorization; Findings; Purpose and Objectives**

##### **Sec. 6-9.102. Findings of fact.**

(a) The flood hazard areas of the City of Yuba City are subject to periodic inundation which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare.

(b) These flood losses are caused by the cumulative effect of obstructions in areas of special flood hazards which increase flood heights and velocities, and when inadequately anchored,

damage uses in other areas. Uses that are inadequately floodproofed, elevated or otherwise protected from flood damage also contribute to the flood loss.

**Sec. 6-9.103. Statement of purpose.**

It is the purpose of this chapter to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provisions designed:

- (a) To protect human life and health;
- (b) To minimize expenditure of public money for costly flood control projects;
- (c) To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- (d) To minimize prolonged business interruptions;
- (e) To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in areas of special flood hazard;
- (f) To help maintain a stable tax base by providing for the second use and development of areas of special flood hazard so as to minimize future blight areas;
- (g) To insure that potential buyers are notified that property is in an area of special flood hazard; and
- (h) To insure that those who occupy the areas of special flood hazard assume responsibility for their actions.

**Sec. 6-9.104. Methods of reducing flood losses.**

In order to accomplish its purposes, this chapter includes methods and provisions for:

- (a) Restricting or prohibiting uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;
- (b) Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
- (c) Controlling the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel flood waters;
- (d) Controlling, filling, grading, dredging, and other development which may increase flood damage; and
- (e) Preventing or regulating the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards in other areas.

**Sec. 6-9.501. Standards of construction**

***(c) Elevation and floodproofing.***

(1) New construction and substantial improvement of any structure shall have the lowest floor, including basement, elevated to or above the base flood elevation. Nonresidential structures may meet the standards in Section 6-9.501(c)(3) below. Upon the completion of the structure, the elevation of the lowest floor, including basement, shall be certified by a registered professional engineer or surveyor, or verified by the community building inspector to be properly elevated. Such certification or verification shall be provided to the Public Works Director.

(2) New construction and substantial improvement of any structure in Zone AO shall have the lowest floor, including basement, elevated above the highest adjacent grade at least as high as the depth number specified in feet on the FIRM, or at least two (2) feet if no depth number is specified. Nonresidential structures may meet the standards in Section 6-9.501(c)(3) below. Upon the completion of the structure, the elevation of the lowest floor, including basement, shall be certified by a registered professional engineer or surveyor, or verified by the community building inspector to be properly elevated. Such certification or verification shall be provided to the Public Works Director.

(3) Nonresidential construction shall either be elevated in conformance with the above paragraphs or together with attendant utility and sanitary facilities:

(i) Be floodproofed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water;

(ii) Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and

(iii) Be certified by a registered professional engineer or architect that the standards of this subsection are satisfied. Such certifications shall be provided to the Public Works Director.

**Sec. 6-9.503 Standards for subdivisions.**

(a) All preliminary subdivision proposals shall identify the flood hazard area and the elevation of the base flood.

(b) All final subdivision plans will provide the elevation of proposed structure(s), pads, and adjacent grade. If the site is filled above the base flood, the final pad elevation shall be certified by a registered professional engineer or surveyor and provided to the Public Works Director.

(c) All subdivision proposals shall be consistent with the need to minimize flood damage.

(d) All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage.

(e) All subdivision proposals shall have adequate drainage provided to reduce exposure to flood hazards.

**Sec. 6-9.505 Floodways.**

Located within areas of special flood hazard established in Section 6-9.302 are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of flood waters which carry debris, potential projectiles, and erosion potential, the following provisions apply:

(a) Prohibit encroachments, including fill, new construction, substantial improvements, and other development unless certification by a registered professional engineer or architect is provided demonstrating that encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.

(b) If the above is satisfied, all new construction and substantial improvements shall comply with all other applicable flood hazard reduction provisions of this article.

(c) All subdivision proposals shall be consistent with the need to minimize flood damage.

(d) All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage.

(e) All subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage as set forth in Section 6-9.403(a)(1). Certification of compliance shall be required of the developer.

**Chapter 5 Fire Prevention**

**Sec. 4-5.01. Adoption of the California Fire Code.**

(a) There is hereby adopted by the City of Yuba City for the purpose of prescribing regulations governing conditions hazardous to life and property from fire or explosion that certain code and standards known as the California Fire Code (hereinafter sometimes referred to as the "Fire Code"), including Appendix Chapters I-A, I-B, I-C, II-A, II-B, II-C, II-D, II-E, II-F II-H, II-I, II-K, III-A, III-AA, III-B, III-BB, III-C, III-D, IV-A, IV-B, VI-A, VI-B, VI-C, VI-D, VI-E, VI-G, VI-H, VI-I, VI-J, VI-K and the Uniform Fire Code Standards, as published by the Western Fire Chiefs Association, being particularly the 2000 Edition of the Uniform Fire Code, including the 2001 California Fire Code and amendments thereof, and the whole thereof, save and except such portions as are deleted, modified or amended by the provisions of this Chapter, and said Fire Code and Standards are hereby adopted and incorporated as fully as if set out at length therein and from and after January 1, 2003, the provisions of said Code shall be controlling within the City of Yuba City.

#### **Sec. 4-5.01.1. Findings of fact.**

The City Council finds that the following regulations as contained in this Chapter are necessary to mitigate unique local climatic conditions and impose substantially the same requirements as are contained in the uniform model industry codes. The unique local conditions as found and determined are as follows:

Yuba City is located in the northern portion of the Central Valley. The area is bounded to the north by the Siskiyou mountains, the west by the Coastal mountains, the east by the Sierra Nevada mountains, and the south by the Delta region. These geographical factors, and the area's proximity to the Pacific Ocean, combine to determine weather and wind conditions that influence the area and can create a particularly hazardous fire situation.

Four (4) weather conditions routinely present themselves which can result in extremely dangerous fire situations that could result in widespread conflagration. The four (4) conditions are temperature, relative humidity, wind and fog.

Temperatures in the Yuba City area during the summer months are in the ninety (90) degree Fahrenheit range with high temperatures of one hundred (100) degrees being very common.

Low relative humidity is a very important weather condition that can intensify fire behavior. When relative humidities fall below thirty (30%) percent, the potential for fire spread is significantly increased. A recent review of data available from the National Weather Service of a recent thirty-eight (38) month period revealed that the Yuba City area experienced four hundred three (403) days when the relative humidity was recorded at or below thirty (30%) percent.

Wind velocity directly contributes to flame spread and the potential for conflagration. Winds, in combination with relative humidities below thirty (30%) percent contributes to "drying out" fuels. The Yuba City area is subject to strong north winds which are usually very drying in nature. A review was made of the days with relative humidity at or below thirty (30%) percent and winds of ten (10) miles per hour or more using the same thirty-eight (38) month period as was previously mentioned. Of the four hundred three (403) days of thirty (30%) percent or below relative humidity, one hundred ninety-seven (197) days also had winds that equaled or exceeded ten (10) miles per hour.

The weather conditions described above have a direct influence on fire behavior. High temperatures, low humidities and wind, singularly and in combination, produce a potentially explosive fire situation.

In addition to the weather conditions described above, the Yuba City area also experiences very dense fog conditions in the wintertime. The presence of dense fog poses significant response problems to emergency response vehicles. Obviously, if dense fog is present, response speeds must be reduced. This reduction in response speed results in longer response times. The longer it takes the fire department to arrive, the larger the fire grows. Research, using the same thirty-eight (38) month period mentioned above, was done to determine how many days of heavy fog the Yuba City area experienced. Heavy fog was defined as one-fourth (1/4) of a mile visibility or

less. The data revealed that during the thirty-eight (38) months reviewed, heavy fog occurred on one hundred three (103) days. It is important to note that the fog prone months of November and December were missing for two (2) of the three (3) years reviewed.

As a result of these findings of fact on local climatic conditions within the Yuba City area, the City Council finds that the fire code provisions and the automatic sprinkler requirements herein established by this Chapter are considered "reasonable and necessary modifications" as provided for in California Health and Safety Code sections 18941.5(c) and 17958 et seq. Because of these serious concerns as reflected in the foregoing findings of fact, it is important that for the effective protection of the citizenry and property within the City limits of the City of Yuba City from the ravages of fire and the reduction of the potential for community-wide conflagration that this ordinance be enacted. Only with the enactment of these regulations can the reduction of the potential for community-wide conflagration and the protection of the citizenry and property within this jurisdiction be realized.

## **Services/Groups**

### **Building Department**

The function and purpose of the Building Division is to protect the health and safety of citizens through the enforcement of current building codes in order to ensure that structures built and existing within the City limits meet minimum safety standards. Our Division issues building permits for new construction, repairs or alterations to existing structures, as well as electrical, plumbing and mechanical permits.

### **Planning**

The Planning Division strives to create a distinctive and livable community through quality design, use of good site development and building standards, and use of land and services. In doing so provide everyone with professional and courteous service in a fair and timely manner.

### **Public Works**

The Public Works Department provides construction, operation, and maintenance services to the City's infrastructure system to include streets, water, sewer, and storm drainage systems.

## **Community Plans/Programs/Projects**

### **Storm Water Management & Industrial Pretreatment Programs**

The City of Yuba City has a National Pollution Discharge Elimination System (NPDES) permit and Storm Water Management Program. Both control mechanisms are required by State (Porter-Cologne Water Quality Control Act) and Federal law (Clean Water Act) and guide the City in its mission to prevent water pollution.

The City has a single water distribution system that brings drinking (domestic supply) water to all homes and businesses. Many people are unaware there are two separate collection systems for transporting wastewater and storm water throughout the City. The sanitary sewer (wastewater collection system) takes sewage and wastewater from homes and businesses within the City limits and transports it to the Wastewater Treatment Facility on Burns Drive. It then undergoes treatment (cleaning) before disposal. Water that falls as rain (storm water) flows from driveways, parking lots, exterior storage areas, roads and other locations into the storm water collection system and then into the Feather River. There is no treatment/cleaning provided for storm water. Pollution prevention for storm water is based on good housekeeping and best management practices (BMPs) which prevent contaminants from accessing storm water run-off.

### **2004 Water Master Plan Update Report**

The 2004 Water Master Plan Update Report evaluated the existing and future water needs for the City and the City's Sphere of Influence (SOI), including the former Hillcrest Water Company groundwater regions acquired by the City in May 2001. The result of this evaluation was the proposed Capital Improvement Program (CIP) for the City's water distribution system and Surface Water Treatment Plant (SWTP). The CIP identified improvements needed to meet the projected growth and water demand in the City, former Hillcrest Regions, and future developments in the SOI. The Executive Summary provides a brief overview of the update study's purpose, objectives, findings and recommendations, and the recommended CIP

### **2005 Urban Water Management Plan**

Urban water suppliers are required by the Urban Water Management Planning Act to update their Urban Water Management Plan every five years. The UWMP is a planning tool for both the City of Yuba City and California Department of Water Resources. The main functions include:

- Consolidation of water agency information by DWR,
- Planning tool for future water demand,
- Improve statewide planning,
- Encourage public input and information,
- Provides information to DWR, who in turn prepares a statewide report to the state legislature.

### **West Yuba City Area Master Drainage Study**

Yuba City recently approved a new General Plan (adopted on April 8, 2004) that provides a vision for future development within the City's boundary and within its sphere of influence (SOI) through 2025. The SOI is essentially consistent with the urban growth boundary (UGB), and it is anticipated that the lands within the SOI/UGB will be developed over the next 20 years and will be annexed into Yuba City.

A critical element for the planning of new growth is determining infrastructure needs and funding mechanisms to pay for the required infrastructure. Development of agricultural lands results in constructing buildings and pavement, which greatly increases the runoff rate and total

volume of runoff. Consequently, new drainage facilities, including storm drain collection systems, open channels, detention basins, and pump stations, are needed to manage the increased runoff and prevent flooding. The purpose of this MDS is to ensure that the required drainage infrastructure is constructed when it is needed to allow for the development identified in the General Plan.

### **Flood Management Facilities: Planned Improvements**

According to the City's General Plan, Capital Improvement Program (CIP for the 2006-2010 timeframe includes nine planned drainage improvements listed below:

- Onstott Drainage Improvements
- Forbes Street storm Drain: Clark to Olive
- Richland and Jones Road Strom Drain
- B Street Storm Drain: Boyd to Courthouse
- B Street Storm Drain: Courthouse to 2nd

Planned Improvements to Levee Reaches from Yuba City include:

- Feather River upstream from Honcut Creek
- Feather River between Honcut Creek and Jack Slough
- Feather River between Jack Slough and Yuba River
- Feather River between Yuba River and Bear River

# CITY OF LIVE OAK

The City of Live Oak has several documents and activities that describe how the City manages development of hazard prone areas. A list of these programs, documents and activities follow, along with a brief summarization of the program status and document contents.

## **General Plan, 1992**

The General Plan is a document that guides the City’s future development. It is a blueprint for land use in the City and provides long-term direction for the growth of the City. It is a 15 to 20 year plan for the City and expresses broad community values and goals, giving a picture of the desired character and quality of development in the City and policies which outline the steps to accomplish those goals.

## **General Plan Update**

The City of Live Oak is its General Plan in an effort to reflect the current state of the city and to plan for the future. A General Plan is a state mandated planning document which addresses present and future land use, transportation, housing, historic preservation, open space and other important community components. The Live Oak General Plan was last updated in the early 1990’s and does not adequately reflect what is happening both in and around the city. The following section reflects the current goals and policies from their 1992 General Plan.

### **Land Use Element**

#### **Goal:**

- Conserve natural resources in and around the City.

#### **Policies:**

- Existing trees shall be preserved in the City.
- Preserve and rehabilitate any continuous riparian corridors and adjacent habitat along existing waterways.

### **Housing Element**

#### **Goal:**

- Promote the construction of a variety of housing types that meet safe standards with minimal environmental impact and provide a choice location, preserve existing neighborhoods, and have adequate public services for the residents of the City of Live Oak.

#### **Policies:**

- Ensure that all residential development meets or exceeds current state energy efficiency and water conservation standards and encourage retrofitting of existing development to improve energy efficiency and water conservation.

## Codes and Ordinances

### Chapter 8.08 Fire Prevention Code

#### 8.08 .010 Adoption.

Pursuant to the provisions of Article 2 of Chapter 1 of Part 1 of Division I of Title 5 (Section 50020 et seq.) of the Government Code, there is adopted and there shall be enforced, in the incorporated territory of the city, the Fire Prevention Code, and Appendices A and B, the latest edition thereof, as amended, hereinafter called the “primary code” and any and all writings, things, and matters incorporated therein by reference, hereinafter called the “secondary codes,” promulgated, published and recommended by the National Board of Fire Under writers, whose address is 465 California Street, San Francisco 4, California, which is a nationally recognized and approved publication and compilation of proposed rules, regulations or standards of a private organization or institution, which has been in existence for a period of at least three years. (Ord. 131 § 1, 1965)

#### 8.08.060 Section 28.1 amended—Bonfires and outdoor rubbish fires.

Section 28.1 of the primary code is amended to read as follows:

“Section 28.1—BONFIRES AND OUTDOOR RUBBISH FIRES.

“A. PERMIT REQUIRED.

“1. No person shall kindle or maintain any bonfire or rubbish fire or authorize any such fire to be kindled or maintained on or in any public street, alley, road or other public ground without a permit or other proper authorization.

“3. The City Council shall by resolution annually determine and establish fire hazard seasons during various portions of the year in various geographical areas of the city. Said resolution shall be published at least once in the Live Oak Acorn, a newspaper of general circulation printed and published in the City of Live Oak, State of California, eight (8) days prior to the effective date of said resolution. During said fire hazard season designated by resolution, burning permits shall be required for the following:

“(a.) Disposal of waste materials or rubbish from the construction or demolition of buildings or other structure where said burning is to be made either on the premises or in the immediate vicinity of the buildings or structures being constructed or demolished.

“B. LOCATION RESTRICTED.

No person shall kindle or maintain any bonfire or rubbish fire or authorize any such fires to be kindled or maintained on any private lands unless; (1) the location is not less than 10 feet from any structure and adequate provision is made to prevent fire from spreading to within 10 feet of any structure, or; (2) the fire is contained within an approved type of incinerator with a closed, approved type spark arrester, located safely not less than five feet from any other flammable material.

**8.08.070 Dry and combustible materials near buildings.**

Dry and combustible materials, including dry weeds, grass and general growth, and trash and rubbish shall be kept cleared for a minimum distance of fifteen feet around buildings at all times. (Ord. 131 § 7. 1965)

**Chapter 13.36 - DRAINAGE IMPROVEMENT FACILITIES**

**13.36.010 Declaration.**

The city council of the city finds and declares that new building and improvement projects greatly heighten and increase stormwater runoff; that there is certain flooding and the potential for flooding in certain areas of the city; and that in the best interests of the citizens of the city and to promote and protect the health and welfare of the residents of the city it is necessary for persons who carry out such projects within those areas to pay a reasonable fee to control and prevent such flooding. (Ord. 263 § 1, 1981)

**TITLE 15 - BUILDINGS AND CONSTRUCTION\***

**Chapter 15.01 - BUILDING CODES**

**Subchapter 10- UNIFORM FIRE CODE**

**15.01.910 Adoption of the Uniform Fire Code.**

There is adopted by the city, for the purpose of prescribing regulations and governing conditions that are hazardous to life and property from fire or explosion, that certain code and standards known as the Uniform Fire Code, including all Appendices and the Uniform Fire Code Standards published by the Western Fire chiefs Association and the International Conference of Building Officials, being particularly the 1997 edition thereof and the whole thereof, save and except such portions as are hereinafter deleted, modified or amended by the provisions of this article, of which code not less than three copies have been and are now on file in the office of the City Clerk and said code and standards are adopted and incorporated as fully as if set out at length herein and from and after the date on which the ordinance codified in this article shall take effect the provisions thereof shall be controlling within the city.

**Chapter 15.21 - FLOOD DAMAGE PREVENTION**

**15.21.020 Findings of fact.**

A. The flood hazard areas of the city are subject to periodic inundation which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base all of which adversely affect the public health, safety and general welfare.

B. These flood losses are caused by the cumulative effect of obstructions in areas of special flood hazards which increase flood heights and velocities, and when inadequately anchored, damage uses in other areas. Uses that are inadequately floodproofed, elevated or otherwise protected from flood damage also contribute to the flood loss. (Ord. 318 § I (part), 1988)

### **15.21.030 Statement of purpose**

It is the purpose of this chapter to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provisions designed:

- A. To protect human life and health;
- B. To minimize expenditure of public money for costly flood-control projects;
- C. To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- D. To minimize prolonged business interruptions;
- E. To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in areas of special flood hazard;
- F. To help maintain a stable tax base by providing for the second use and development of areas of special flood hazard so as to minimize future flood blight areas;
- G. To ensure that potential buyers are notified that property is in an area of special flood hazard; and
- H. To ensure that those who occupy the areas of special flood hazard assume responsibility for their actions. (Ord. 318 § 1(part), 1988)

### **15.21.040 Methods of reducing flood losses.**

In order to accomplish its purposes, this chapter includes methods and provisions for:

- A. Restricting or prohibiting uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;
- B. Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
- C. Controlling the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel floodwaters;
- D. Controlling, filling, grading, dredging, and other development which may increase flood damage; and
- E. Preventing or regulating the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards in other areas. (Ord. 318 § I (part), 1988)

### **15.21.081 Standards of construction.**

In all areas of special flood hazards the following standards are required:

#### **C. Elevation and Floodproofing.**

1. New construction and substantial improvement of any structure shall have the lowest floor, including basement, elevated to or above the base flood elevation. Nonresidential structures may meet the standards in subdivision 3 of this subsection C. Upon the 405 completion of the structure the elevation of the lowest floor including basement shall be certified by a registered professional engineer or surveyor or verified by the community building inspector to be properly elevated. Such certification or verification shall be provided to the floodplain administrator;
2. New construction and substantial improvement of any structure shall have the lowest floor, including basement, elevated above the highest adjacent grade at least as high as the depth number specified in feet on the FIRM; or at least two feet if no depth number is specified. Nonresidential structures may meet the standards in subdivision 3 of this subsection

C. Upon the completion of the structure the elevation of the lowest floor including basement shall be certified by a registered professional engineer or surveyor or verified by the community building inspector to be properly elevated. Such certification or verification shall be provided to the floodplain administrator;

3. Nonresidential construction shall either be elevated in conformance with subdivisions 1 or 2 of this subsection C, or together with attendant utility and sanitary facilities:

a. Be floodproofed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water,

b. Have structural components capable for resisting hydrostatic loads and effects of buoyancy, and

c. Be certified by a registered professional engineer or architect that the standards of this subdivision 3 are satisfied. Such certifications shall be provided to the floodplain administrator;

## **Services/Groups**

### **Public Works**

The Public Works Department provides engineering, construction, operation, and maintenance services to the City's infrastructure system to include streets, water, sewer, and storm drainage systems.

### **Fire Department**

The mission of the City of Live Oak Fire Department is to protect life, property, and the environment, through the delivery of innovative and efficient quality emergency management services in our community. The Fire Department provides responses to fire, medical, and other emergencies (e.g. toxic cleanup). Also, the department is actively involved in educating the public through various prevention programs designed to minimize the loss of life and property as well as the prevention of injury.

## **Community Plans/Programs/Projects**

### **Water Tank**

A 1.4 million gallon storage tank is being installed at Live Oak Park to provide better water service for the existing residents of Live Oak, as well as for future development. Due to new regulations for drinking water, the water tank area is being designed to accommodate a treatment facility on-site to filter the water to insure that it meets all of the upcoming quality standards imposed by the Federal government. The tank will be painted beige with the City of Live Oak insignia in green.

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