HEALTH AND SAFETY ELEMENT

I. INTRODUCTION

The purpose of the *Health and Safety Element* is to reduce or eliminate long term risk to people and property from natural or man made hazards. Traditionally viewed as an element that focuses on planning for catastrophes, this element is now expanded to include community health and community safety related issues that are more commonly associated with the built environment as affecting the health and safety of residents living within the County. This element concentrates on those hazards and community factors which are within the responsibility of the County to mitigate. These include land use decisions and patterns of development that directly and indirectly affect the health, wellbeing and personal/property protection of county residents, and the mitigation of potential natural hazards. The *Health and Safety Element* describes the location and extent of known hazards, and provides maps of hazardous land uses and evacuation routes.

The *Health and Safety Element* is the primary vehicle for relating County land use policies to local safety planning, and is comprised of three major components that include "Natural Hazards", "Community Health", and "Community Safety". While the *Land Use Element* identifies areas where hazardous land uses may be located, the *Health and Safety Element* contains policies for determining acceptable levels of public risk imposed by these land uses, as well as policies for mitigating the effects of natural or manmade catastrophes.

A. Geography and Climate

The County encompasses approximately 1,391 square miles, most of which is part of the San Joaquin Valley with a southwest portion of the County covering the eastern slope of the California Coast Ranges. The majority of the County within the valley floor is bounded on the north and west by Fresno County, the east by Tulare County, and the south by Kern County. All of which make up the southern end of the San Joaquin Valley.

Most of the County is relatively flat. However, elevation ranges are at the lowest point at 175 feet above sea level in the Tulare Lakebed, and range up to 3,500 feet above sea level in the southwest along the Coast Ranges. The County is located in the Tulare Lake hydrologic region the comprises the extreme southern portion of the Central Valley. The rivers in this region include the Kings, Kaweah, Tule and Kern, which all historically drained into the Tulare Lake. The lake was once of substantial size during wet periods, but over time the 200,000 acre lakebed has been reclaimed for agriculture with the construction of reclamation district levees. The four rivers were diverted upstream and canals now transfer water to other locations.

The County has four incorporated cities and four unincorporated communities (Armona, Home Garden, Kettleman City, and Stratford) which provide water, sewer and other limited community services. According California Department of Finance, over three quarters of Kings County's 2008 estimated 154,434 population live within the four Cities (includes prison populations). Approximately 18% of the total County population lives within the unincorporated portions of the County, excluding Naval Air Station Lemoore and Santa Rosa Rancheria populations. Of this amount, approximately 8,640 individuals live within the four unincorporated communities, 7,940 on federal land (Lemoore NAS and Santa Rosa Rancheria), with the balance of 13,931 spread throughout most of the northern half of the County's agricultural lands.

The climate in Kings County can be classified as Mediterranean with average rainfall rates of 7.6 inches annually, occurring primarily between November and April. The average annual temperature is 62 degrees Fahrenheit (°F), although it is not unusual for summer readings to reach well over 100°F. Extreme winter lows fall into the teens on rare occasions. The first freeze usually occurs in December and the last in March. Fog is common during the winter months and can settle in for periods of up to two weeks.

Major access routes to Kings County include Interstate 5, and State Routes 198, 43 and 41. Other County roads such as Houston Avenue, Grangeville Boulevard, 6th Avenue, Kansas Avenue and Jackson Avenue also provide alternative access routes. Railroad transport is served by the Burlington Northern Santa Fe Railroad, and the San Joaquin Valley Railroad. Only one municipal public airport exists within the City of Hanford, and the Corcoran Airport is also open to general aviation. Other private airports and airstrips exist throughout the County, however, these are primarily agriculture related crop duster landing and maintenance facilities.

B. Determination of Acceptable Risk

Any activity poses some risk. The question for public officials is whether hazards which fall within the scope of public responsibility can be mitigated to acceptable levels. Where there is a question as to whether sufficient mitigation can be achieved, development will be delayed until such measures are found.

C. Natural Hazards

Kings County along with the four incorporated Cities of Avenal, Corcoran, Hanford and Lemoore, and a number of special districts developed the *Kings County Multi-Jurisdictional Multi-Hazard Mitigation Plan* (HMP) to reduce future losses to the County and its communities resulting from natural hazards. The HMP was adopted by the Kings County Board of Supervisors in October 2007 and the four cities, and is incorporated by reference (attached as Appendix D). The *Health and Safety Element* of the *Kings County General Plan* focuses on the implementation of goals and policies as they relate to the County's responsibility in implementing the plan. The HMP was prepared to meet the requirements of the Disaster Mitigation Act of 2000 and to achieve eligibility for the Federal Emergency Management Agency (FEMA) Pre-Disaster Mitigation and Hazard Mitigation Grant Programs.

Proactive mitigation planning at the local level can help reduce the cost of disaster response and recovery to property owners and government by protecting critical community facilities, reducing liability exposure, and minimizing overall community impacts and disruption. Kings County has been affected by several disasters in the past and is committed to reducing disaster impacts and maintaining eligibility for federal mitigation grant funding.

D. Community Health and Community Safety

The Community Health and Safety components of this element address factors within the built environment that contribute to the improvement of public health and safety of people and property. Discussion focuses on new development and the built environment as a significant contributing factor to the public health and well being of community residents. The County recognizes that current patterns of development are not conducive to providing healthy eating opportunities, walkability within communities, and opportunities for physical activities. The predominance of obesity and

diabetes in our society has been attributed to the diet, exercise, and contributing factors associated with the built environment. As unincorporated communities, they often lack the level of public safety resources for crime prevention and fire protection that cities often provide. Sufficient crime prevention and fire protection resources are essential to the effective re-investment and re-vitalization of the County's unincorporated communities. This component is focused on guiding future development in a manner that contributes to the positive health and safety of residents and aims to avoid land use decisions that lead to deteriorated community health and safety conditions. Airport safety and hazardous materials are also considered part of the built environment and addressed in this section.

E. *Health and Safety Element* Public Participation

A collaboration between the Kings County Community Development Agency and Public Health Department set the stage for a common approach in evaluating Community Health and Community Safety through the built environment. Community health audits were performed in the unincorporated communities which engaged residents to better assess the needs and deficiencies in the unincorporated communities. These community health outreach efforts looked to evaluate community walkability, opportunities for physical activity and location of healthy eating opportunities.

The Kings County Fire Department took the lead in preparing the Kings County Multi-Jurisdictional Multi-Hazard Mitigation Plan (HMP), and the Kings County Community Development Agency fully participated in meetings to coordinate and develop the plan. The planning process for the HMP followed a methodology prescribed by FEMA, and began with the formation of a Hazard Mitigation Planning Committee (HMPC) comprised of key stakeholders from Kings County, participating jurisdictions, and state and federal agencies. The initial kick off meeting with the committee was held on October 27, 2006, and a public participation meeting was held in the Board of Supervisors Chambers on March 29, 2007.

F. Response to Disasters

This element incorporates the Kings HMP and implements the policy recommendations for the County's area of responsibility as guiding policies in dealing with natural disasters. As a joint jurisdictional mitigation plan, the County's efforts are interconnected with the Cities' to provide a countywide coordinated approach to dealing with natural catastrophes. The Kings County Office of Emergency Management which is coordinated through the Kings County Fire Department and operated out of the County Fire Department Headquarters is also responsible for organizing disaster response. An Emergency Response Plan is maintained by the Kings County Office of Emergency Management and establishes procedures and operations to be carried out during and after large scale disasters.

G. General Plan Consistency

The *Health and Safety Element* is consistent with other elements of the General Plan. The goals, objectives and policies of the *Health and Safety Element* reinforce and support general plan strategies that are interwoven and connected to other elements of the General Plan. There is a close connection between public health/safety and land use, therefore *Health and Safety Element policies* are closely coordinated with *Land Use* as well as *Circulation, Noise, Resource Conservation, Open Space, Housing* and *Air Quality Elements*. In addition, this Element establishes some general framework

policies that are implemented in greater detail through the four community plans and relate to the locations of urban versus open land uses, housing concentrations, and transportation routes.

H. Scope and Organization

The remainder of this element is organized into five sections. Section II incorporates the County's Natural Hazard Mitigation Plan and includes discussion of significant natural hazards that the County is susceptible to. Section III provides of Community Health related factors, while Section IV discusses Community Safety related issues. Section V contains all *Health and Safety Element* Goals, Objectives and Policies, and Section VI identifies programs to implement the *Health and Safety Element*.

This element is organized into the following sections:

II. Natural Hazards – Geologic Hazards, Flood Hazards, Temperature Hazards, Fire Hazards, and Wind Hazards.

III. Community Health – Built Environment Health, Healthy Eating Opportunities, Physical Activity Areas, and Medical Services.

IV. Community Safety – Safe Routes, Built Environment Safety, Law Enforcement, Fire Protection, Emergency Operations, Evacuation Routes, and Airport Safety.

V. Health and Safety Policies – Natural Hazards, Community Health, and Community Safety.

VI. Implementation – Implementation Programs.

II. NATURAL HAZARDS

Kings County is subject to natural hazards that threaten life and health and have caused extensive property damage through an assortment of hazards including flooding, earthquakes, freezes, extreme heat, and thunder or hail storms. While these hazards are acts of nature, the impacts on residents, public facilities, businesses, and private property can be diminished through proper hazard mitigation planning. The Natural Hazards policies of this Element are intended to prepare the community for natural hazard related events and disasters. The primary objective of which is to reduce loss of life, serious injury, property damage, and economic and social dislocation resulting from natural hazards.

In order to offset the devastating affects of natural hazards a *Kings County Multi-Jurisdiction Multi-Hazard Mitigation Plan* (HMP) was developed under the guidance of the Kings County Fire Department/Kings County Emergency Operations staff and the consulting firm "amec". The overall purpose of the HMP was to reduce natural hazard vulnerability and make the communities of Kings County more disaster resistant and sustainable. Development of the NHMP involved Kings County, the four incorporated Cities (Avenal, Corcoran, Hanford, and Lemoore), and several special districts.

These agencies worked together to develop natural hazard mitigation strategies that involve sustained action to reduce or eliminate long-term risk to human life and property from hazards. The HMP development process included identifying natural hazards that threaten communities, determined the most likely impacts of those hazards, set mitigation goals, and developed strategies that may be prioritized and implemented to lessen the impacts. Risk assessments were done to examine the recorded history of losses resulting from natural hazards, assess probability and magnitude of future hazard events, and analyze the county's assets at risk to hazards. The HMP was also designed to guide and coordinate mitigation activities that may be used in local land use decisions. A list of natural hazards with the potential to occur in Kings County are identified in Table HS – 1.

Table HS-1: Potential Natural Hazards in Kings County

Hazard	Probability of Occurrence	Spatial Extent	Potential Magnitude	Significance
Dam Failure	Unlikely	Extensive	Catastrophic	Low
Drought	Occasional	Extensive	Critical to Catastrophic	High
Earthquake	Occasional	Significant	Critical	High
Extreme Heat	Highly Likely	Extensive	Limited	Medium
Flood	Likely	Significant	Critical	Medium
Fog	Highly Likely	Significant	Limited	Medium
Freeze	Likely	Significant	Limited	Medium
Landslide	Occasional	Limited	Negligible	Low
Soil Hazard: Expansive, Liquefaction, Erosion	Unlikely	Limited	Negligible	Low
Tornado	Occasional	Limited	Negligible	Low
Wildfire	Likely	Limited	Critical	Medium
Source: Kings County Multi-Hazard Mitigation Plan prepared by amec.				

The HMP was prepared in coordination with the Kings County Community Development Agency as the planning effort has many common overlapping issues related to the *Health and Safety Element*. The HMP is considered a complimentary document that addresses natural hazards and works toward enhancing safety related preventative and responsive efforts. The risk assessment performed in developing the HMP indicated that earthquakes, floods, droughts, and extreme heat are the hazards most likely to significantly affect people and property in Kings County.

A. Geologic Hazards

Natural geologic processes that represent a hazard to life, health, or property are considered geologic hazards. This section of the *Health and Safety Element* is intended to prepare County residents and businesses for geologic hazards including seismically induced surface rupture, ground shaking and ground failure, liquefaction, landslides, and subsidence. Although it is not possible to prevent or mitigate all geologic hazards, their destructive effects can be reduced to acceptable levels or avoided through careful planning and project design and siting.

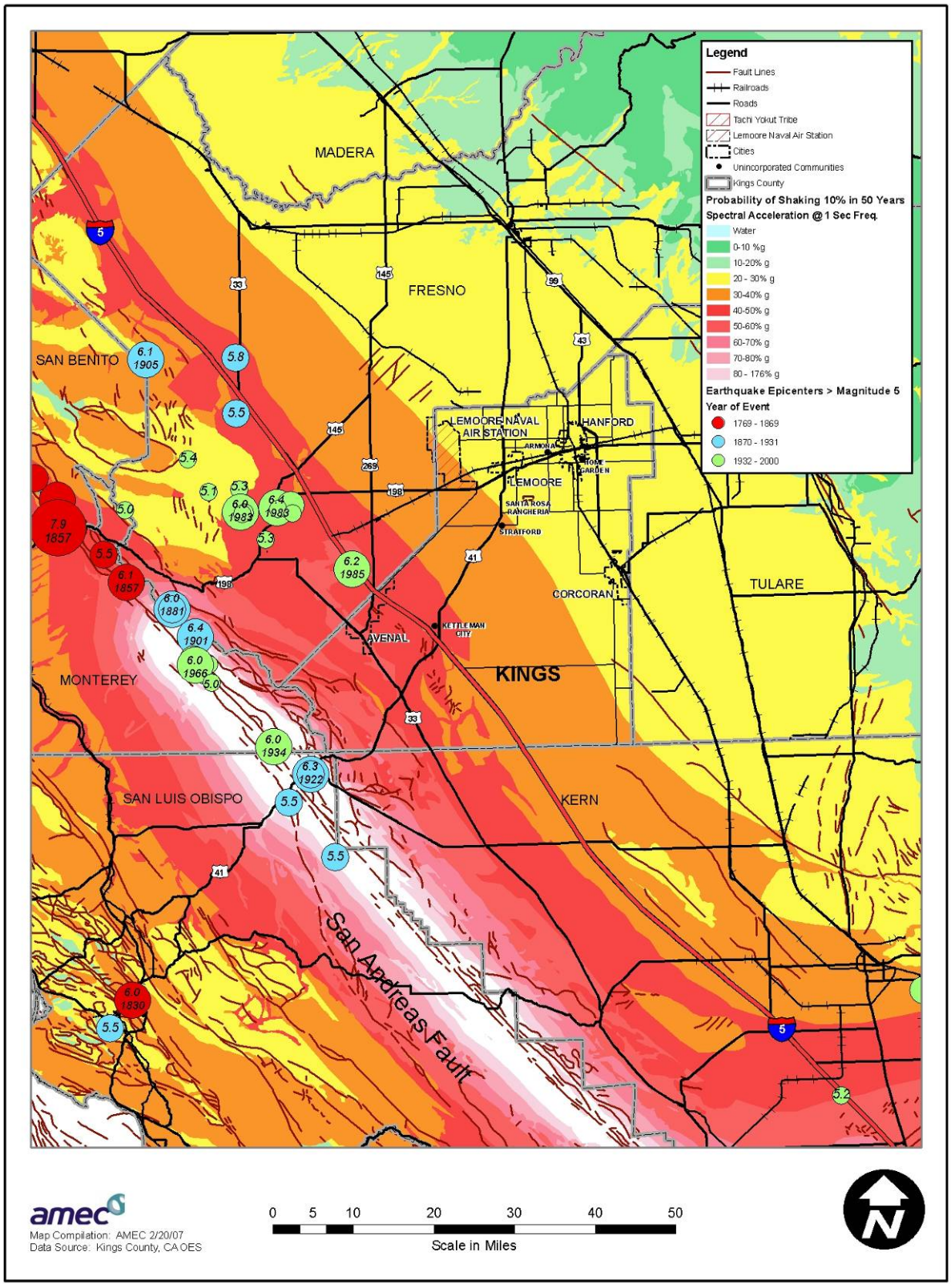
Earthquakes

Kings County has no known major fault systems within its territory. The greatest potential for geologic disaster in Kings County is posed by the San Andreas Fault, which is located approximately four miles west of the Kings County line boundary with Monterey County. The San Andreas Fault marks the divide between the North American and the Pacific Tectonic Plates. Another large fault that may pose potential geologic hazards for Kings County is the White Wolf fault located south of the County near Arvin and Bakersfield.

Over the past 200 years, Kings County has not experienced any damaging earthquake equal to or greater than a Mercalli Index (M) 6.0. However, several more significant earthquakes have occurred within close vicinity of the County's boundary. The largest and most forceful earthquake was the 1857 Fort Tejon earthquake (M 7.9) with an epicenter that occurred in Monterey County approximately seven miles west of the Kings County boundary in the community of Parkfield. During this event the San Andreas Fault ruptured for a length of approximately 225 miles between Parkfield and San Bernardino. The largest earthquake in Southern California since the Fort Tejon earthquake was the 1952 Kern County earthquake (M 7.3) which occurred on the White Wolf fault. The epicenter for this quake occurred approximately 38 miles southeast of the Kings County boundary near Bakersfield and produced ground shaking felt over 200 miles away. The most recent earthquakes to impact Kings County occurred during the 1980's. The 1982 New Idria earthquake (M 5.4) and the 1983 Coalinga (M 6.5) earthquakes both occurred approximately 20 miles from the western border of Kings County. These two earthquakes were followed by the 1985 Kettleman Hills earthquake (M 6.1) with an epicenter located four miles west of the Kings County border just north of the City of Avenal. All three of these earthquake incidents produced low level ground shaking and low local magnitude in Kings County. Figure HS – 1 identifies Earthquake Hazards including historical epicenter locations.

The potential for ground shaking is discussed in terms of the percent probability of exceeding peak ground acceleration (% g) in the next 50 years. It varies from 20-30% g in the northeast third of the county, including the cities of Hanford, Lemoore, Corcoran, and the Santa Rosa Rancheria to 30-40% g in the central part of the county, which is primarily agricultural. Earthquake hazard is more severe in the southwest third of the county and the city of Avenal. The potential for ground shaking in this area ranges from 40-50% g to 70-80% g at the southwestern county line.

Figure HS-1 Kings County Earthquake Hazards



The primary hazard due to seismic activity in Kings County would come from ground shaking. The potential for extensive surface rupture is considered to be minimal, since Kings County does not contain a major fault system. Minor surface rupture could be expected in areas of minor faulting, primarily in the southwestern portion of Kings County along the Kettleman Hills or west of Kings County along the Nunez Fault located near Coalinga. Research coordinated by the Southern California Earthquake Center in 1995 concluded that there is an 80 to 90 percent probability that an earthquake of M 7.0 or greater will hit Southern California along the San Andreas fault before 2024 (CA-SHMP 2004). The southern San Andreas Fault section near the Fort Tejon earthquake of 1857, is considered a likely location for an earthquake within the next few decades (USGS 1997). Earthquake recurrence on the southern San Andreas Fault varies greatly from under 20 years at Parkfield to more than 200 years in other sections.

In populated areas, the greatest potential for loss of life and property damage from a powerful earthquake can be a direct result of ground shaking. The degree of damage depends on many interrelated factors, including magnitude, focal depth, distance from fault, duration of shaking, type of surface, ground water depth, topography, and quality of buildings. Since new structures can be designed and built to withstand probable shaking without collapse, the greatest existing danger relating to geological events is the continued use of older structures incapable of withstanding earthquake forces. Wood frame structures of two stories or less constructed prior to 1948 can be considered safe, while buildings constructed prior to 1948 of other materials should be considered suspect. In all cases, unreinforced masonry structures should be considered unsafe.

Damage and injury resulting from geologic hazards can be reduced to acceptable levels through zoning and building permit review procedures and construction standards. New construction conforming to the standards of the California Building Code (CBC) will provide adequate protection. Dams, schools, and hospitals are more stringently regulated by state and federal agencies for protection against such hazards. It should be noted that the purpose of the earthquake provisions of the CBC is to prevent loss of life, not to prevent structural damage.

Additional technical data is also derived from the *1974 Five County Seismic Safety Element* which is still valid and is the basis for the Kings County Seismic Zone Description (Table HS-2) and Seismic Safety Map included as Figure HS – 2. Seismic Zones are categorized by the intensity of ground motion that could be reasonably anticipated if an earthquake affected Kings County. Within Kings County, territory is divided between two Seismic Zone groups that correspond to general groundshaking characteristics. Valley Zones (V1 through V4), represents areas along the valley floor with highest near-surface amplification identified along the west and decreasing towards the east due to the damping of thick alluvial sediments. Coast Ranges Zones (C1 and C2) represent the Kettleman Hills and Coast Range areas that are closest to the San Andreas Fault and anticipated to experience moderately high ground shaking levels. The safest zones correspond generally to the areas of greatest population within the County. Zone V1, the area of least expected seismic shaking, encompasses the Cities of Hanford and Lemoore, Communities of Armona, Home Garden and Stratford, and Naval Air Station Lemoore residential areas and Santa Rosa Rancheria. Zone V2 contains the City of Corcoran. Kettleman City and Avenal, however, are located within Zone V4 and adjacent to more critical Coast Ranges Zones.

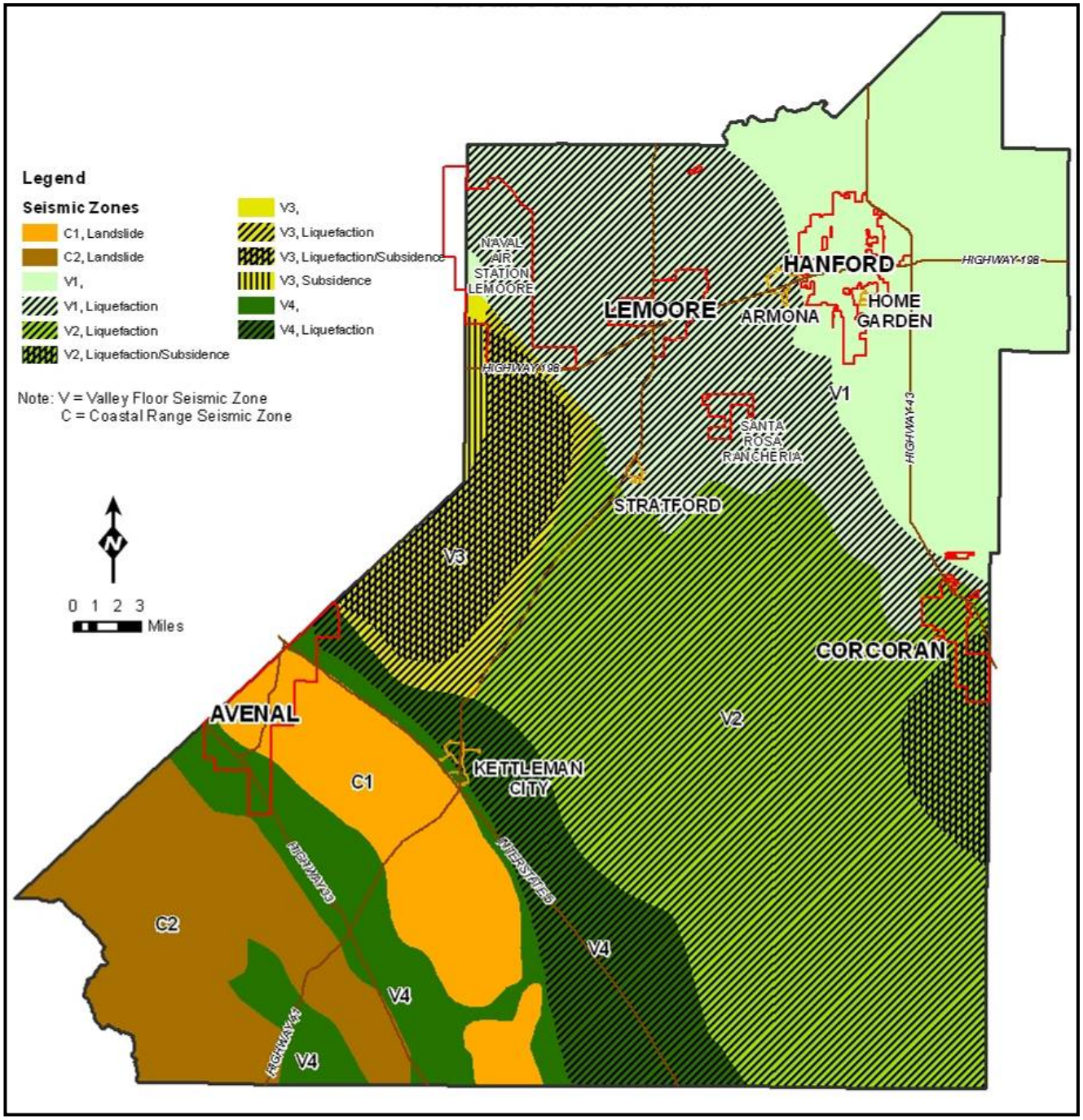
Land use policies will continue to require large minimum parcel sizes in agricultural and natural resource conservation zones, and reduce potential losses by lowering potential development density throughout more intensive seismic zones. Construction in the more critical seismic zones, however, would probably require additional reinforcement to offset the increased expected seismic forces.

Table HS-2: Seismic Zone Description

SEISMIC ZONE	GENERALIZED GEOLOGIC FORMATIONS	AMPLIFICATION OF SHAKING
***V1**	Moderately thick section of marine and continental sedimentary deposits overlying the granitic basement complex	Amplification of shaking that would affect low to medium- rise structures is relatively high but the distance to either of the fault systems that are expected sources of the shaking is sufficiently great that the effect should be minimal
***V2**	Moderately thick section of marine and continental sedimentary deposits overlying the granitic basement complex	Amplification of shaking that would affect low to medium- rise structures is low and the distance to the San Andreas fault zone is moderate. The combined effect is that shaking is expected to be minimal
***V3**	Thick section of marine and continental sedimentary deposits	Amplification of shaking is reduced by the damping effect of the thick sedimentary section, but the moderate proximity of the San Andreas fault zone results in a moderate increase in expected shaking over that for the east side of the valley
***V4**	Thick section of consolidated sedimentary units overlain by thick unconsolidated alluvial fan deposits	Amplification of shaking is reduced by the damping effect of the thick sedimentary section, but its moderately close proximity to the San Andreas fault zone results in the expectation of moderately high shaking characteristics
****C1**	Thick section of consolidated sedimentary units, with a high frequency of exposure	Amplification of shaking is low because of the firm nature of the surface in this area. But, because of its close proximity to the San Andreas fault zone, the combination results in moderate to moderately high shaking characteristics
****C2**	Moderately thick section of marine sedimentary rock unit with a high frequency of exposure throughout the area, with some metamorphics locally, which are of minor importance	Amplification is low, but the close proximity of the San Andreas fault zone should result in moderately high to high shaking characteristics

* Valley Floor Seismic Zone
** Coastal Range Seismic Zone
Source: *1974 Five County Seismic Safety Element*

Figure HS-2 Seismic Safety Map



Subsidence and Liquefaction

Ground settlement and soil compaction may occur as a result of seismic ground shaking. When unconsolidated valley sediments are saturated with water, water is forced to the ground surface, where it emerges in the form of mud spouts or sand boils. If soil liquefies in this manner (liquefaction), it loses its supporting capacity, which can result in the minor displacement to total collapse of

structures. These types of unconsolidated sediments represent the poorest kind of soil condition for resisting seismic shock waves. The potential for liquefaction is recognized throughout the San Joaquin Valley where unconsolidated sediments and a high water table coincide (Kings County Emergency Operations Plan 2002). However, the risk and danger of liquefaction and subsidence occurring within the County is considered to be minimal.

Most of Kings County east of Interstate 5 and west of the Burlington Northern and Santa Fe Railroais mapped as having liquefaction potential according to the *Five County Seismic Safety Element* and also displayed on Figure HS-2. Figure HS-2 shows various seismic zones and areas where landslides, subsidence, or liquefaction could possibly occur. As detailed in Table S-2, Zones V4, C1, and C2 would likely experience the greatest ground shaking. Consideration of future development proposals in areas of potential liquefaction should place primary emphasis upon communicating to developers the findings of the *Five County Seismic Safety Element* and studies performed by the U.S. Geological Survey. The problem of potential liquefaction should be handled on a site-by-site basis by a licensed soils engineer.

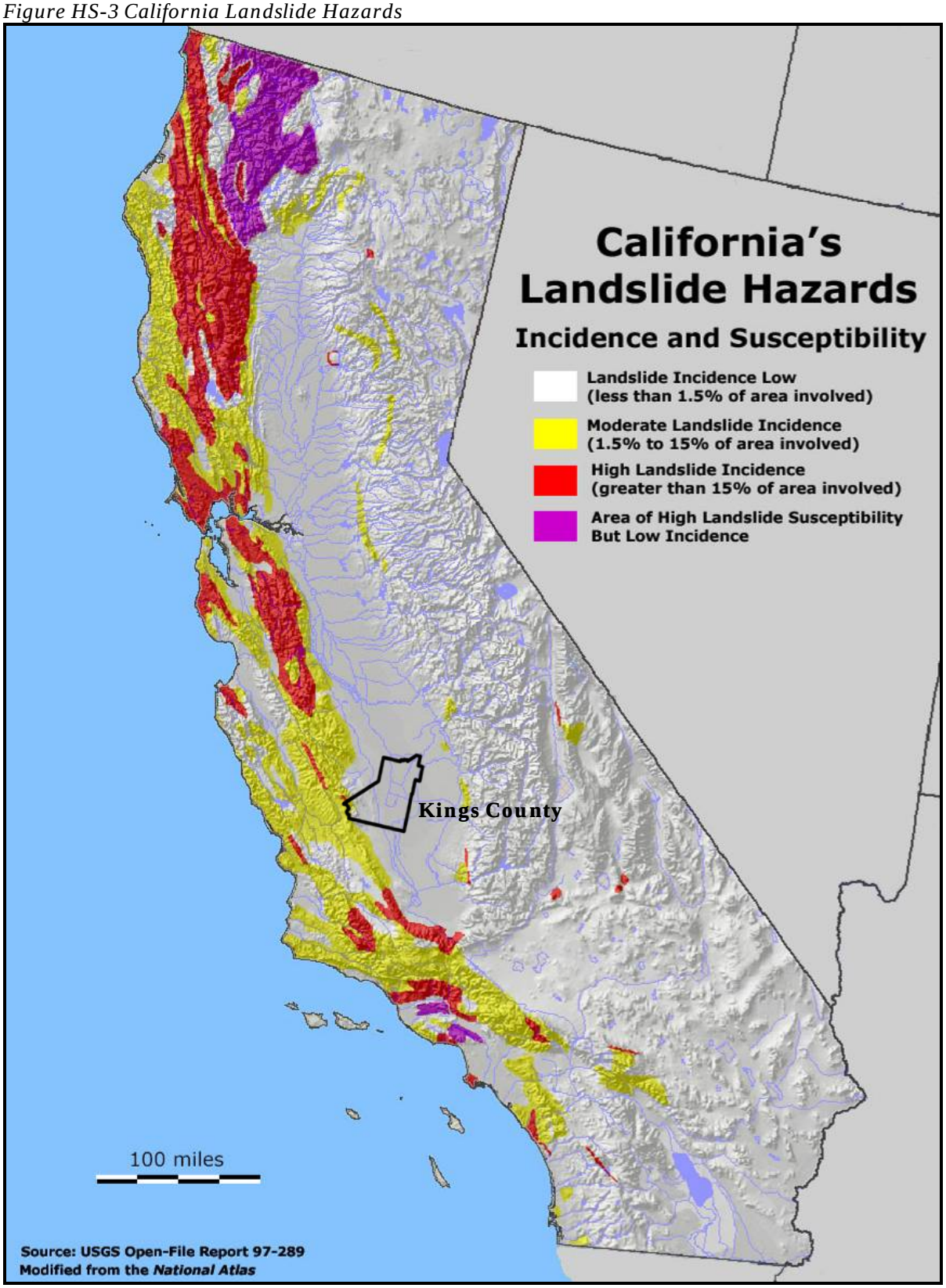
Landslides

Landslides may be triggered by both natural and human induced changes in the environment resulting in slope instability. Precipitation, topography, and geology affect landslides and debris flows. Human activities, such as mining, road construction, and changes to surface drainage areas, also affect the landslide potential. Landslides often accompany other natural hazard events, such as floods, wildfires, or earthquakes. They can also occur slowly or very suddenly and damage and destroy structures, roads, utilities, and forested areas and cause injuries and death.

Kings County, however, is fortunate to have very “Low” to “Moderate” risk landslide areas that are located in remote uninhabited sections of southwest Kings County. Although landslides are primarily associated with steep slopes (i.e., greater than 15 percent), they may also occur in areas of generally low relief and as cut-and-fill failures, river bluff failures, lateral spreading landslides, collapse of mine-waste piles, and failures associated with quarries and open-pit mines.

The USGS Landslide Hazards was used to identify possible landslide problem areas. The map in Figure HS-3 depicts where territories throughout the State, including Kings County, may be susceptible to landslides. Those areas potentially susceptible to landslides within Kings County are nearly all defined as having “Low” (less than 1.5 percent of area involved) and “Moderate” potential (1.5 to 15 percent of area involved) for landslide incident. A smaller portion of land within the Coast Ranges, along the southwest corner of the County, is the only area rated to have “High” (Greater than 15 percent of area involved) landslide incident probability. The southwest portion of the county is designated for Agricultural and Natural Resource Conservation land uses and therefore not likely to result in any dense population or development.

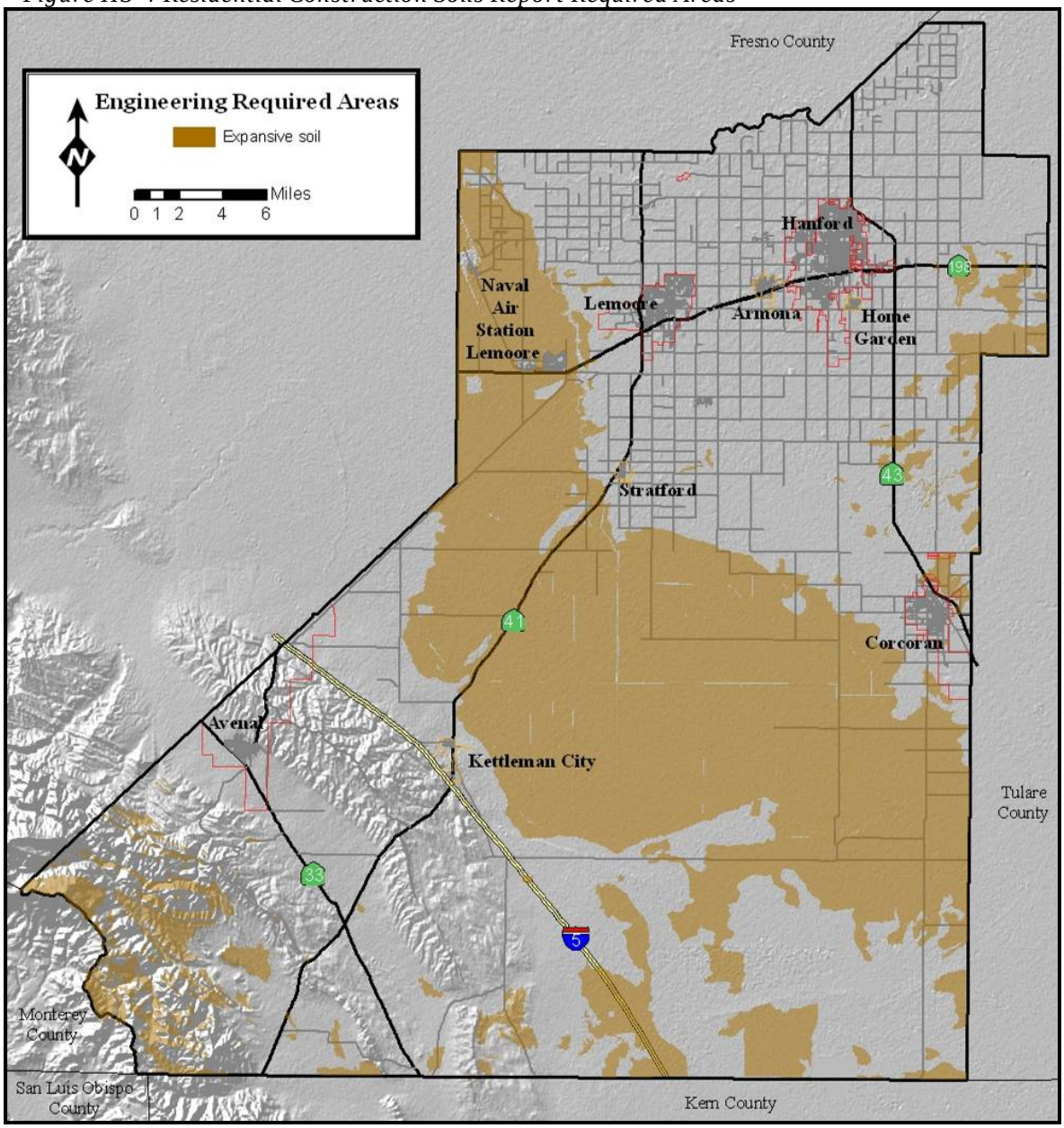
Figure HS-3 California Landslide Hazards



Potential Structural Damage

The geologic hazards in Kings County are most critical for communities along the west. Data from the Federal Emergency Management Agency's HAZUS (computer hazard estimation modeling tool) presented in the HMP predicts estimated losses countywide for all jurisdictions for two different earthquake scenarios. The model predicts building losses will be highest in manufactured housing, which may be an important consideration for the County's housing rehabilitation programs in unincorporated areas. There are less than 10 unreinforced masonry buildings in the unincorporated County and none of these exist within Seismic Zone V4. Residential construction in areas depicted on Figure H-4 also require a geotechnical soils report (California Building Code, Section 1802.1).

Figure HS-4 Residential Construction Soils Report Required Areas



B. Flood Hazards

Figure HS - 5 Flooding Northwest of Corcoran

Kings County, and in particular the Tulare Lake Basin, once served as the natural drainage of the Kings River, Cross Creek, and Tule River as a part of the hydrologic watershed of the Sierra Nevada Mountains along the east side of the San Joaquin Valley. Canal and flood control development in the late 1800's and early 1900's redirected water flow and managed waterways through a series of canals, water storage and agricultural levies. This led to the conversion on thousands of acres of lake basin land into farmable ground. These waterways and the lake basin remain the predominant flood prone areas as defined by the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps. Historically, floods have been the major cause of disaster in Kings County, and past flooding events have shown that the lake basin has been turned to as a default emergency overflow for extreme incidences of floodwater. The primary cause of local flooding is due to the drainage patterns that flow towards the Tulare Lake Basin, in southern Kings County. This area has no outlet to the ocean unless the water is pumped by artificial means out of the Tulare Lake Basin.

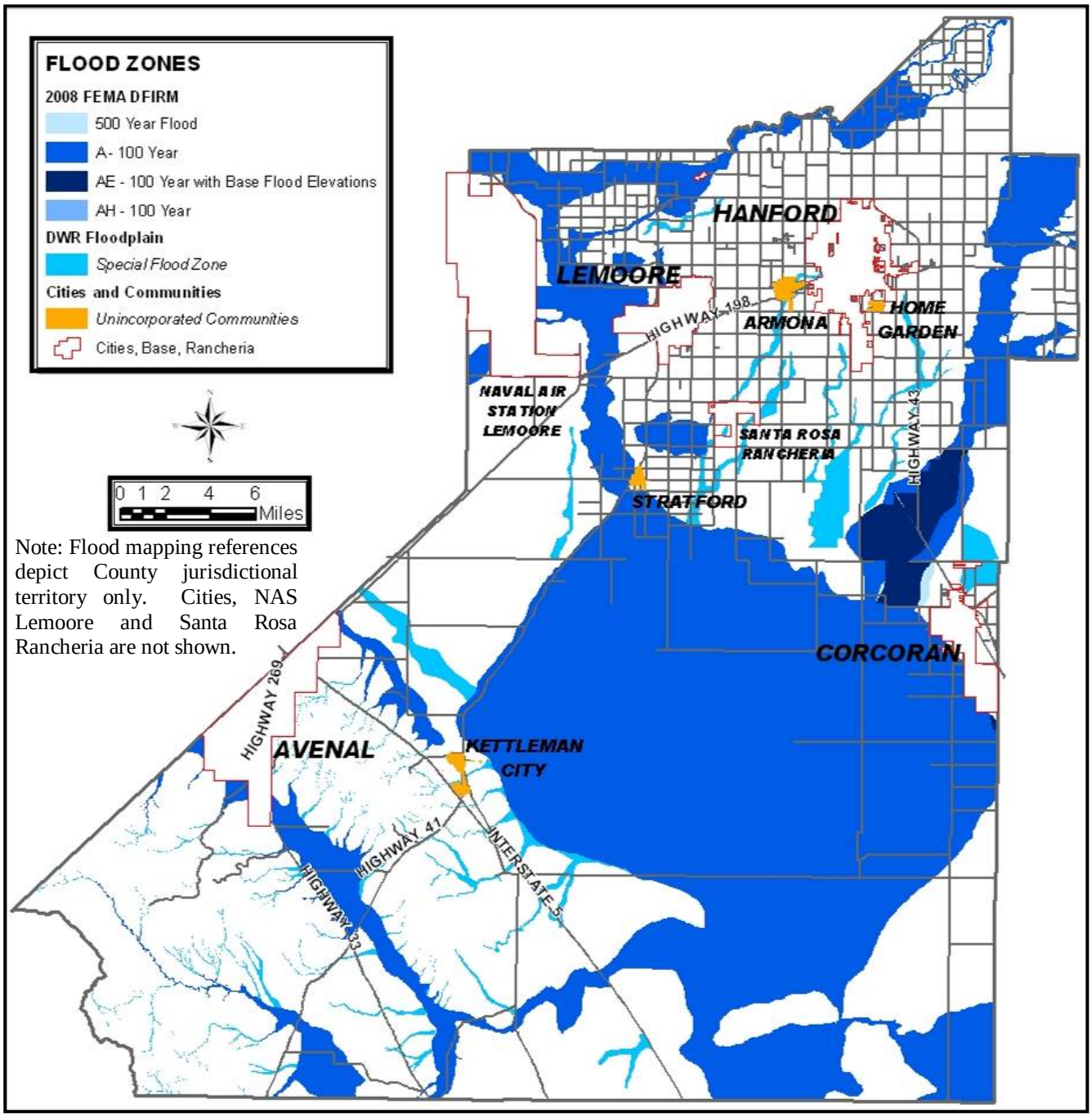
Flooding can cause drowning, destroy buildings, and wash away public facilities, roads, crops, and soil. The disruption of sewage treatment services during flooding is a particular concern, since it can cause deterioration of drinking water quality and severely impact public health. Floodwaters may facilitate the proliferation of mildew, bacteria, and other disease vectors.

Assessment of Flood Hazards and Risks

Significant flooding occurs in Kings County approximately every five years. The Federal Emergency Management Agency (FEMA) and the Federal Insurance Administration have assessed flood hazards for major streams in Kings County. Projected areas and likely severity of flooding are shown on the Flood Insurance Rate Maps compiled by FEMA, and available at the Kings County Community Development Agency or viewable using the "Geographic Information System Viewer" on the Agency's website (www.countyofkings.com/planning). In 2009, FEMA completed their Digital Flood Insurance Rate Map (DFIRM) conversion and updated a number of flood zone areas using 2005 levee certification criteria. In 2007, the California Department of Water Resources completed their Awareness Floodplain Mapping of Kings County to identify all pertinent flood hazard areas that are not mapped under FEMA's program, which provides an additional resource for identifying special flood hazard areas within the County. Figure HS – 5 displays flood zones based upon FEMA's DFIRM (2009) and California Department of Water Resources' Awareness Floodplain Map (2007).

Kings County maintains a floodplain management program based on these maps, and implemented through the County's *Flood Damage Prevention Ordinance* (Chapter 5A of the Kings County Code of Ordinances). The purpose of this ordinance is to prevent development in FEMA designated flood prone areas, or to ensure that development in those areas can avoid or withstand flooding without increasing flood risk elsewhere. Flood prevention and control in community districts and urban fringe areas are most effectively deterred by structural means such as curbs, gutters and storm drainage systems. In more rural and less developed Agriculture and Open Space areas, more passive measures are relied upon such as high crowns on roadway pavement to divert floodwaters onto adjacent properties that are more suited to accommodate the diverted drainage.

Figure HS - 6 Flood Hazard Areas

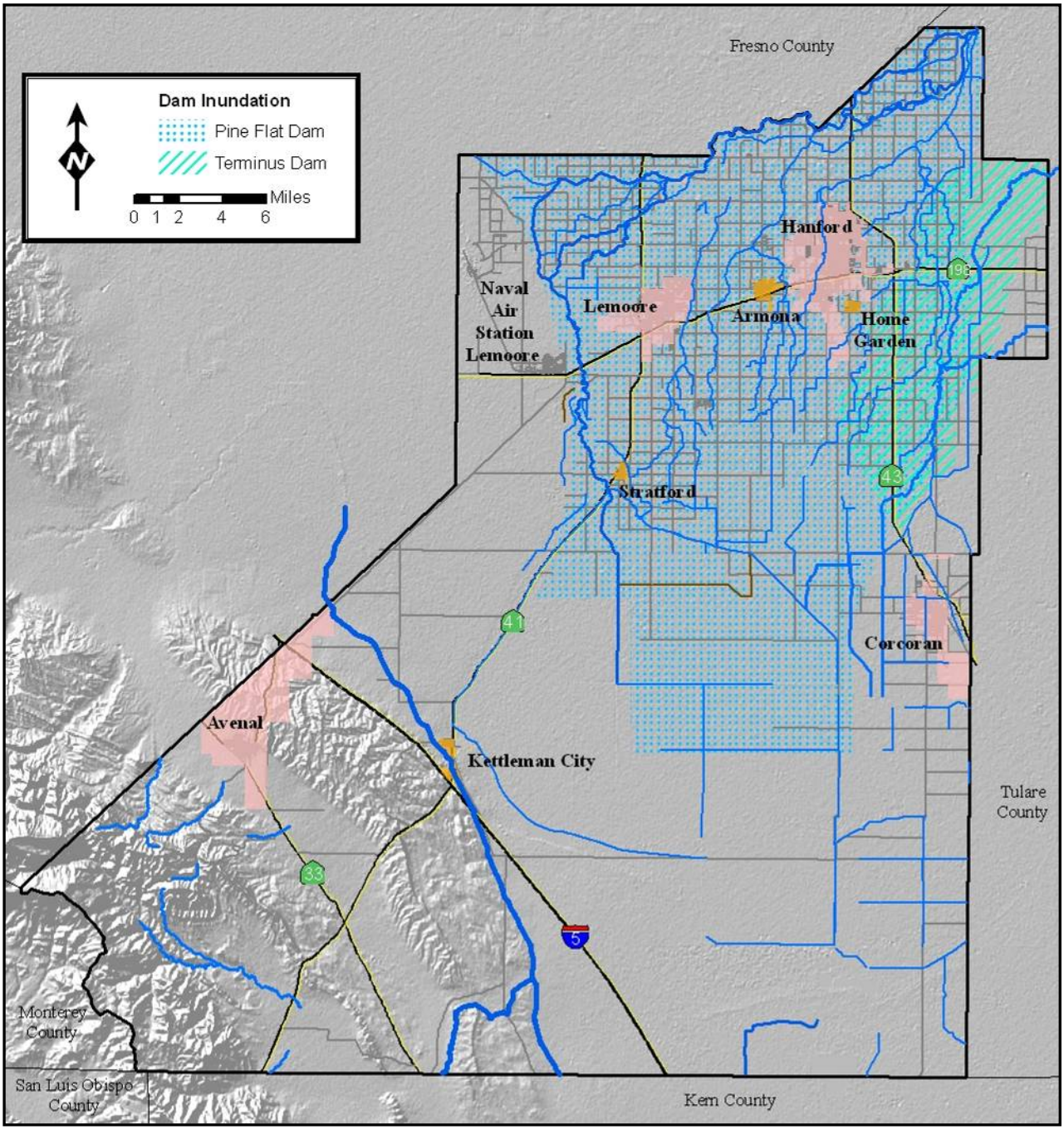


Dam Inundation Areas

The Terminus, Success, and Pine Flat Dams (located east of the valley floor in the Sierra Nevada Mountains and feeding the Kaweah, Tule, and Kings Rivers, respectively), plus improvements made to other flood control facilities in the Kings County area, have significantly reduced local natural flood hazards. According to Army Corps of Engineers inundation maps, the failure of Success Dam would

not affect inhabited portions of Kings County. Pine Flat and Terminus are the only dams in the region which, if breached, might cause flooding of significance to local inhabited areas (see Figure HS - 7). If Pine Flat Dam failed while at full capacity, its floodwaters would arrive in Kings County within approximately five hours. If Terminus Dam failed while at full capacity, its floodwaters would arrive in Kings County within approximately twelve hours. The chances of any of these dams failing while at full capacity are considered remote.

Figure HS - 7 Dam Inundation Areas



C. Temperature Hazards

Extreme Heat

Extreme heat events can have severe impacts on human health and mortality, natural ecosystems, agriculture, and other economic sections. In Kings County, temperatures that equal or exceed 105°F and night time minimum HI of 80°F for two or more consecutive days is considered excessive heat. The National Weather Service has a system in place to initiate alert procedures (advisories or warnings) when temperatures reach these levels and may have a significant impact on public safety. In Kings County, extreme heat is largely a public health issue and a livestock issue. Two Plans have been developed to address the two most pressing areas of need, safety and relief of vulnerable populations, and the proper disposal of livestock carcasses.

High temperatures with low humidity during the summers can be life threatening when temperatures exceed 105°F. July 2006 was the second hottest July on record with temperatures in Kings County reaching as high as 111 degrees. That month's heat wave resulted in at least 140 deaths over a 13 day period across all of California. In an effort to proactively address extreme heat emergencies, the Kings County Public Health Department implemented the "Kings County Extreme Heat Emergency Plan" to address the safety needs of vulnerable populations throughout the County and prevent future fatalities. The plan entails public workshops, guidelines for declaring heat emergencies, tips for residents, and designated cooling places.

The Kings County Office of Emergency Management initiated and established the "Kings County Emergency Action Plan for Dead Animal Management" after extended periods of excessive heat in the summer of 2006 resulted in substantial numbers of dairy cow fatalities throughout the County. Rendering plants were unable to keep up with the number of carcasses needing processing and an emergency declaration was made to address the proper disposal of the excess carcasses that could not be accommodated at the few available rendering plants.

The summertime climate in Kings County is hot and arid, and the entire County is susceptible to extreme heat. In 2005-2006 the USDA declared an emergency twice for Kings County's heat waves. Temperatures at or above 95°F are common most summer months, and it is highly likely that extreme heat will continue to occur on an annual basis in the future.

Drought

Water is critical to the sustainment of communities as well as the County's agricultural industry. When prolonged periods of below average water supply occur, the resulting drought can affect the health, wellbeing, and quality of life of residents as well as have an adverse economic impact on the County. Drought is often characterized by deficiencies in surface and subsurface water supplies, measured through stream flow, snowpack, and lake, reservoir and groundwater levels.

Drought conditions can be subtle in one given season or prolonged over a number of years. The last severe drought recorded as a State Disaster Declaration was in 1976 with a damage cost of about $2.66 billion Countywide. Locally, however, the most recent droughts occurred in 1987-1992 (USDA drought disaster declaration), 2004-2005 (USDA drought disaster declaration), and likely to be recognized again for the 2008-2009 time period or longer. During the 1987-1992 drought, runoff from the San Joaquin Valley was 47 of average and the Kings River flow was inadequate to provide sufficient water for agricultural uses for the fifth consecutive year. The agricultural industries rely

upon surface water deliveries and tend to be the first group to experience the impact upon their crops, orchards, vineyards, and other operations involving livestock.

Historical trends across California indicate that 14 droughts have occurred over the past 143 years. On average, drought occurs once every ten years, which is a 10 percent chance of occurring in any given year. In Kings County, four multi-year droughts are on record over the past 56 years, which averages to one in every 14 years or a 7 percent chance in any given year. Based upon these trends, drought will continue to occur occasionally in the future. As increasing population growth, urban development and other water use increase, the demand for this limited vital resource will only become more critical. A growing water consciousness and awareness of the greater need to more efficiently use the resources we currently have while striving to integrate greater conservation efforts is necessary. Communities within Kings County, both urban and agricultural, will need to work cooperatively in seeking out more efficient means by which to use water. This will be crucial to the long term sustainability of the County's living environments as well as vital resources that sustain the area's economy and way of life. The Kings County Water Commission was re-established in 2008 in an effort to build better collaboration and cooperation among the County's agricultural and municipal water providers. The future outlook of limited supply and drought like conditions will likely necessitate the need for stronger conservation efforts throughout the County.

Freeze

Prolonged freezing temperatures can damage or destroy crops, affecting the economy and agricultural jobs in Kings County. More information on these losses can be found in the Economic Assets section of the HMP pages 51 and 52. Water infrastructure is also at risk from freezing, including line breaks and frozen valve gates affecting the distribution system. The County and municipal governments wrap pipes before freezing temperature events to help prevent damage.

Fog

Figure HS - 8 CHP Pace Car In Fog

Winter driving conditions are prone to dense fog blanketing the valley floor. Kings County, with the Tulare Lake Basin, resides in some of the lowest elevations of the San Joaquin Valley floor, and as a result is prone to the pooling of cold air that leads to dense foggy conditions. The worst fog season is December through January, but some areas can experience dense fog from November into March. This condition diminishes visibility on City/County roadways and valley highways making for unsafe driving conditions.

Dense fog can envelope and area quickly and drop visibility to less than 200 feet. Vehicles traveling 65 mph on valley highways can quickly find themselves applying brakes to slow down. When other less cautious drivers continue at unsafe rates of speed, the resulting consequences can be multiple car pileups, severe injury, or even death. It is difficult for motorists to perceive speed in dense fog conditions, and at times traveling as if blind with few visual references other than a few yellow stripped lines to the left and a white line along the right of the drivers vehicle. During times of dense fog, the California Highway Patrol (CHP) will conduct CHP Pace Car activities as shown in Figure HS - 8 to slow traffic down to safe speeds of travel.

In the ongoing effort to educate the public and increase the awareness of drivers to slow down and increase caution and alertness, Caltrans and the California Highway Patrol initiated the "Operation

Fog" in 1991. This effort is aimed at reducing the number of fog related accidents. In 2008, a media campaign added "FOG KILS!" billboards, commercials, and a FOGUniversity website (www.foguniversity.com). This website includes information resources to learn more about accident history, driving safety tips, conditions, stories and contact information.

As visibility diminishes during foggy conditions, the roadway markings and intersection signs become increasingly important references to drivers. Therefore, County roadway maintenance and visibility markings should be prioritized for those routes having higher volumes of traffic and designated as evacuation routes. Caltrans should also remain diligent in continuing to maintain, mark and improve visibility along State Routes and Interstate 5.

D. Fire Hazards

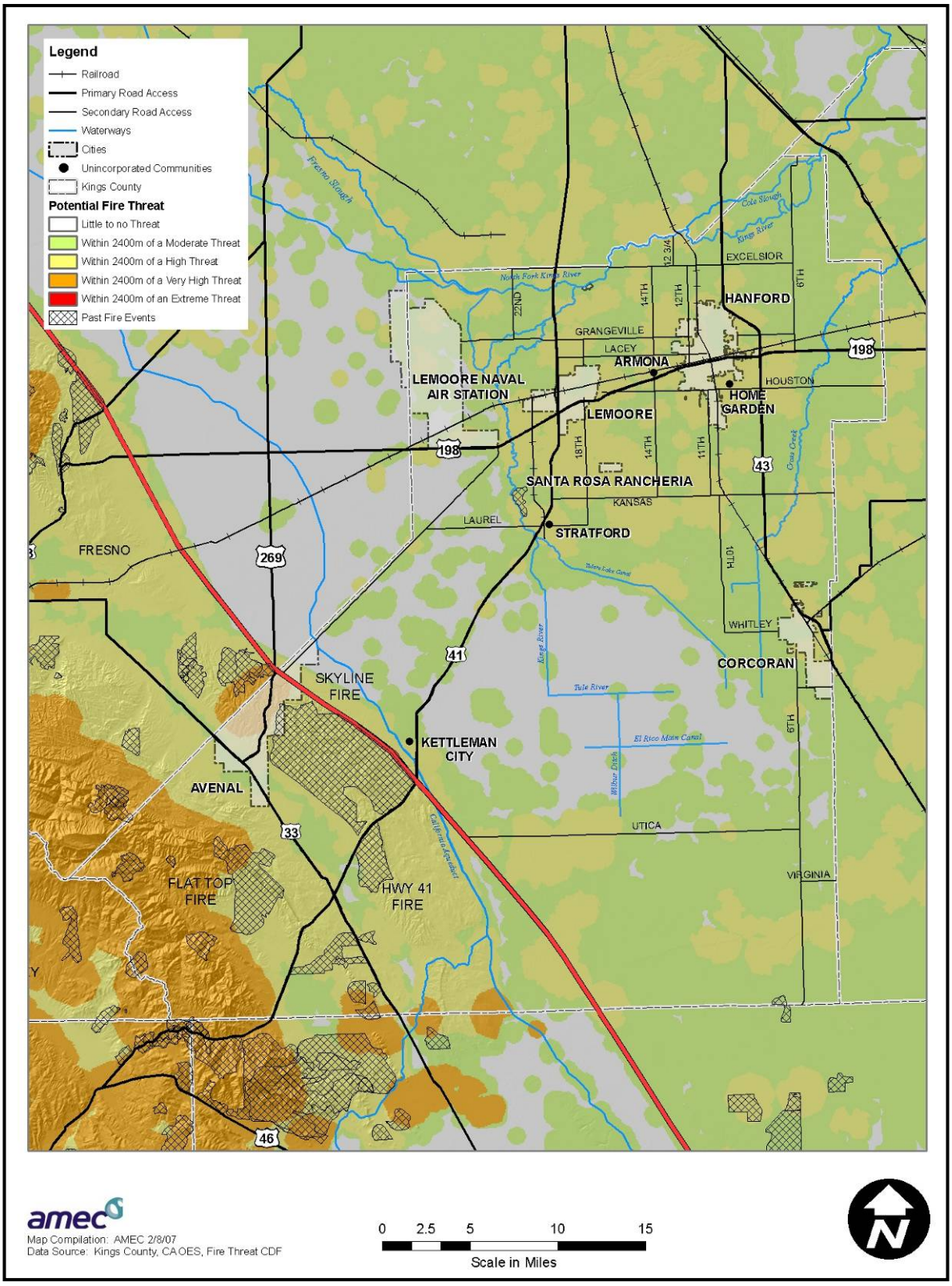
The factors which contribute most to wildland, or nonurban, fires are topography, weather, and the existence of sufficient fuel (either natural vegetation or manmade structures). In rural areas, fire hazards posed by large areas of dry vegetation may be extremely high. Distance from stations and lack of road access may prevent timely response by firefighting personnel. Wildland fire hazards may be reduced by mitigation measures including removal of dry vegetation around structures and installation of dependable water systems.

The aspects of topography which contribute most to wildfire behavior are elevation, slope, and exposure. Since most of Kings County is essentially flat, sloping slightly towards a topographic low point in the Tulare Lake Basin, fire hazard in much of the county is classified as moderate. However, elevations in the southwestern portion of the County are more varied (ranging from the Kettleman Plains, elevation 500 feet, to Table Mountain, elevation 3,499 feet). Therefore, fire hazard in the more steeply sloped southwestern county areas is classified as extreme. Since this part of the county is isolated and contains no urban settlements, hazards to life and property are considered minimal. The list of communities at risk for wildfire, prepared by the California Department of Forestry and Protection, listed only the City of Avenal as a community at risk.

Vacant parcels where dry weeds are permitted to accumulate are a fire hazard, but grain crops such as oats and barley are also at high risk since they are harvested in a dry state during the peak fire season. Crop fires account for most of the annual dollar loss due to wildland fires. In 2007 there were 99 wildland fire incidents in the unincorporated county. Figure HS-9 Potential Fire Hazards depicts the potential fire threat and past fire events throughout the County. Any fire has the potential to quickly become a large, out of control fire, particularly when combined with natural weather conditions common to the area, which include periods of drought, high temperatures, and low relative humidity. Even the flat, urbanized portion of the County has some fire risk.

In recent years, fires throughout the County have not caused large-scale loss of human life. There is always the chance such a disaster could occur, depending upon many interrelated and complex factors, some of which are impossible to predict or prevent. In 2007 there were 437 fires in unincorporated areas of the county which caused $4.6 million in damage. To decrease the hazard of urban fires, property owners and new developments are required to comply with the Kings County Improvement Standards as to minimum road widths, required clearances around structures, and peakload water capacity.

Figure HS – 9 Potential Fire Hazards



E. Wind Hazards

Figure HS – 10 Wind Damage in Avenal 2008

Windstorms and tornados occur occasionally in the County, but historically have been minor in incidences of a limited extent. However, the potential for these hazards does exist and can result in damages. Soon after the adoption of the HMP in late 2007, the City of Avenal experienced a severe windstorm in January 2008. The windstorm pelted the City and brought winds of up to 70 mph that left widespread property damage and power outages. A few injuries were reported, but no fatalities. The property damage was estimated to be $2 million, most of which were roofs, windows and fences. The single largest structural damage was at the Avenal High School where the auditorium roof spanning 4,600 square feet was torn off. The National Weather Service referred to the incident as a "savage windstorm" marked by extreme gusts of wind rushing through the valley. An emergency proclamation was declared by Kings County and later by the Governor.

As these types of events can not be predicted and are less common to the County, preventative measures to minimize property damage and resident injury must rely upon the enforcement of building codes and development improvement standards.

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III. COMMUNITY HEALTH

The Community Health component of the *Health and Safety Element* aims to enhance and maintain healthy community environments within the four communities of Armona, Home Garden, Kettleman City, and Stratford, and surrounding unincorporated areas. This section covers issues relevant to the built environment and health related services that are essential to sustaining healthy living environments where County residents live. The goals, objectives and policies related to community health reinforce the over arching General Plan strategies under which the four community plans were developed and also address community health related issues in greater detail.

Community districts within the County are faced with many obstacles and challenges related to the built environment. Nearly all the County's unincorporated communities lack some form of basic infrastructure, services, and/or amenities that are associated with sustaining healthy living environments. In addition, Kings County has been recognized as having one of the highest incident rates of diabetes, and ranks first for diabetes related deaths among the eight valley Counties from Kern County to San Joaquin County. The public health trends of increased rates of obesity and diabetes coupled with lacking infrastructure, limited opportunities for physical activity and healthy eating will only compound as growth trends lead towards more densely populated environments. Community Health related planning efforts are essential to building sustainable healthy communities and must be coupled with adequate medical services and protection from hazardous substances.

In order to better position communities for enhancing their built environments, community planning efforts must integrate smart growth strategies in the County's four unincorporated communities of Armona, Home Garden, Kettleman City, and Stratford where the densest population concentrations exist. In making strides to counter increasing trends of obesity, diabetes and other related health issues, compact communities should address walkability, opportunities for physical activity, healthy eating opportunities, and centralized commercial and service centers that meet the daily needs of residents. Access to adequate medical services is also essential to the health maintenance and well being of residents, and protective measures should ensure that hazardous waste generation does not adversely affect the lives of residents or the environments in which they live in.

A. Public Health Trends

Obesity in Kings County and the rest of the San Joaquin Valley has reached epidemic proportions. Adult obesity is defined as having a Body Mass Index (BMI) of 30 or higher. The *California Health Interview Survey (*CHIS) conducted in 2003 revealed that 16.1% of adolescents, 67.5% of non senior adults, and 59.2% of seniors were considered overweight and obese in Kings County. Table HS-3 compares the obesity statistics between Kings County, the San Joaquin Valley, and the State of California using a baseline criteria of 25+ BMI. Obesity is a risk factor for numerous health ailments to individuals of any age. Obese adolescents face a risk of developing serious health problems including Type 2 diabetes, high blood pressure, high blood lipids, asthma, sleep apnea, and orthopedic problems. A 2004 report titled "Obesity and Physical Inactivity Among Children and Adolescents in the San Joaquin Valley" (OPIACASJV) stated the obesity rate in the San Joaquin Valley is increasing at an alarming rate and childhood/adolescent obesity can result in significant medical care costs that can extend into adulthood.

Table HS-3: Obesity Statistics

Overweight and Obesity by Age Group San Joaquin Valley and California – (25+BMI)			
	Ages 12-17	Ages 18-64	Ages 65+
Kings County	16.1%	67.5%	59.2%
San Joaquin Valley	15.2%	63.4%	66.4%
California	12.4%	55.5%	56.0%
Source: UCLA Center for Health Policy Research, 2003			

Unhealthy eating habits are a primary risk factor for five of the top ten causes of death in California. To compound this effect, the California Center for Public Health Advocacy has determined that California contains approximately four times as many unhealthy food outlets, such as fast food restaurants and convenience stores, than healthy food facilities such as grocery stores and farmers markets. This overburdened ratio of unhealthy food outlets has lead to the creation of "food deserts" in neighborhoods and communities that lack facilities which provide fresh fruits, vegetables, and other healthy foods. Many disadvantaged residents who reside in these food deserts are unable to travel to healthy food stores to buy food staples. This results in unhealthy diets which may lead directly to obesity.

Lack of physical activity is another major factor in the occurrence of obesity. Recent statistics from the UCLA Health Policy Fact Sheet(November 2006) states that "53 percent of Californians fail to meet recommended guidelines for physical activity, putting them at high risk for illness and premature death." Limited physical activity is a primary risk factor for heart disease, cancer, stroke, and Alzheimer's disease. It is also a primary risk factor for diabetes, one of the fastest growing diseases in California.

According to the "County Health Status Profiles 2006" prepared by the California Department of Health Services, Kings County has the highest age-adjusted death rate from diabetes in California. The four main risk factors that increase an individuals chances of developing Type 2 diabetes are:

- Increasing age
- Heredity
- Obesity
- Physical inactivity

B. Built Environment and Health

Public health research and a growing number of medical and health related professionals as well as a growing number of land use planning professionals are discovering stronger correlative links between the built environment and health of those that live within these environments. Development trends following World War II led toward the establishment of suburban living and automobile dependence. Sixty years later, development trends continued to reinforce reliance upon driving to meet daily needs. The lack of infrastructure improvements in some areas and changing lifestyle of relying on convenience food options and less physical activity have shown results of a growing trend of obesity, air pollution and other deteriorations within the environment. Other vital resources such as agricultural food growing land and water also reinforce the need to make more efficient use of the land resources available. As growing regional planning efforts continue to reinforce the need for higher densities and urban compactness, the inclusion of health related built environment components will become even more critical.

The County's four unincorporated communities of Armona, Home Garden, Kettleman City, and Stratford feature the densest population concentrations. The smart growth principles are integrated into each of the four Community Plans and are consistent with the over arching directives of the General Plan and associated elements. Integrated within each Community Plan are locally defined preferences for more compact development and infill that are centered around defined centralized commercial core areas. Walkable communities with an emphasis on complete streets is oriented towards the encouragement of pedestrian accessibility to commercial and recreational areas. Job creation and community identity are cornerstones of commercial revitalization efforts, while opportunities for supporting locally grown fresh fruits and vegetables are supported.

Integrating infrastructure for creating walkable neighborhoods and opportunities for physical activity are key considerations for providing health related enhancements in the built environment. As most of the County's Communities lack some form of basic infrastructure, such as sidewalks and parks, Community Plans must address the possibilities for prioritizing and working toward investments in these areas. With a lack of parks and sidewalks, residents are left without opportunities to even engage in basic physical activities that is beneficial to their health. Community Asset inventories were conducted to identify existing sidewalks, bike paths, and transportation connectivity. Prioritizing improvements also focused on integrating traffic calming measures as key intersections, and encouraged the use of vanpools and local business attraction.

Figure HS -11 Playground

Downtown Mixed use areas have been designated within each of the four Community Plans. The benefits of Downtown Mixed use is to centralize and provide commercial and community services, while creating a centralized gathering place for activities such as farmer's markets or other community building activities. Economic and environmental benefits are also known to result from this centralized commercial emphasis that has the potential to reduce vehicle trip generation, reduce infrastructure costs, and provide housing alternatives that can be combined with commercial activities. Mixed use housing can enable affordable housing options for a variety of demographic groups including first time homebuyers, young professionals, or seniors.

Efficient movement of people and goods in serving the needs of businesses and residents is vital to daily life activities. Recognizing the dominant reliance upon the automobile in serving those needs, necessitates the need for increased transportation alternatives that will work within a rural county setting in order to increase the chances of successful smart growth implementation in Community Districts. One avenue that is finding success is the variety of "Communal Transportation" (community resident based transportation) options offered or facilitated by Kings Area Rural Transit (KART). The vanpool program launched by KART in 2002 has experienced tremendous success with groups of commuters seeking to pool transportation resources together. KART also has successfully facilitated the Agricultural Industries Transportation Services (AITS) which provides transportation for farmworkers. In addition, KART is also exploring other alternative carpool pilot programs that could enhance the communal based transportation options available. KART and Corcoran Area Transit also provide public bus and dial-a-ride service to enable youth, disabled and senior citizens with public transportation options. Increased walkable access to centralized commercial together with these transportation options will allow greater independence, affordable rates, reliable transportation and healthier movement of people and goods.

C. Healthy Eating Opportunities

In coordination with the County Public Health Department, city and county planning efforts are carrying forward an increased awareness of how the built environment impacts the health and well being of residents. Nationwide and locally, there is an increasing number of youth and adults that are experiencing health complications related to obesity and diabetes. The increasingly sedentary life style of these at risk age groups has been a catalyst for government agencies to look toward new ways of facilitating a comprehensive approach to improving the health of City and County residents by increasing opportunities for healthy foods such as fresh fruits and vegetables in the communities. Within each of the community plans there are specific policies which help facilitate integration between food producers and consumers, and removes many of the typical barriers to direct selling of produce. In addition, opportunities are explored to seek avenues for establishing community benefiting farmers markets and other direct grower to consumer venues. Community plans also serve to encourage the creation of eating establishments that provide healthier food alternatives, while limiting the potential overconcentration of less healthy fast food and convenience store food products.

D. Emergency Medical

Emergency Transport

Figure HS -12 Ambulance

American Ambulance and SkyLife Helicopter provide transport service to local emergency facilities. Since 1991 American Ambulance in a joint venture with Rogers Helicopters established critical air transportation service (SkyLife of Central California), and was awarded the Kings County Ambulance provider contract in 2000 and extended in 2005. There are a total of five American Ambulance staging areas throughout Kings County: two in Hanford and one in Armona, Lemoore and Corcoran. The main staging area in Hanford is located at 910 Garner Avenue. All of these ambulance staging areas are operated 24 hours a day with at least one ambulance located at each post. Additionally, the Kings County Fire Department has trained staff to perform basic EMT services. In 2007, American Ambulance responded to a total of 1,275 requests from County unincorporated areas. Out of those calls 1,086 ambulance arrivals took place and 901 transports took place.

Figure HS -13 SkyLife Helicopter

All SkyLife Helicopter and American Ambulance vehicles are fully equipped with advanced life support systems. For critical emergency situations where geographical constraints impose time or geographical limitations, SkyLife helicopter service can be deployed. SkyLife Helicopter service primary helicopter, an Agusta 109 K2, is based at Fresno Yosemite International Airport in Fresno, CA and is staffed 24 hours/day with a flight nurse, flight paramedic, and EMS pilot. A minimum of one helicopter covers the Fresno/Kings area at all times. SkyLife seasonally staffs a second air ambulance helicopter in Kings County at Fire Station 4, southeast of Hanford. During the months of June through September, between the hours of 10 a.m. to 10 p.m SkyLife service is available within Kings County. Fresno SkyLife Helicopter for the Kings County area is available year round, with a typical response time of 15 to 20 minutes. Generally, helicopter travel time in the valley

is on a 2:1 ratio (40 minutes by ground = 20 minutes by air). Including all of the cities and unincorporated areas of Kings County, SkyLife Helicopter annually transports approximately 100 to 150 residents to local emergency care facilities. SkyLife medical teams have extensive experience in intensive respiratory and coronary care, pediatric ICU, pre-hospital medicine, and emergency care; advanced airway techniques and hemodynamic monitoring; specialized training in altitude physiology; extensive teaching skills for the coronary or surgical patient and specialized training in pediatrics.

Emergency Medical

The Kings County Fire Department currently has trained staff to perform basic EMT (Emergency Medical Technician) services when responding to fire or injury response calls. In case of a major emergency, the ambulance or SkyLife helicopter response is called upon.

Rural Clinic

Figure HS - 14 Central Valley Health Clinic

The Central Valley Health Clinic – Home Garden located at 11899 Shaw Place is operated by Adventist Health and provides public health services in the community. Demand for Health Clinic services has been greater than anticipated and Adventist Health extended the clinic's weekday hours and extended its operating schedule into the weekend. Expansion of the facility is also probable and would provide the community with additional specialty medical services.

Hospitals

The largest hospital in Kings County is the Hanford Community Medical Center which provides general medical and surgical services with 121 beds and 542 full time staff. Although located in the incorporated City of Hanford, the Hanford Community Medical Center provides health support services to residents throughout the County. The Central Valley General Hospital is also located in Hanford and contains 49 acute care beds.

Figure HS - 15 New Hanford Community Hospital

In addition to the Hanford Community Medical Center and the Central Valley Health Clinic, Adventist Health is constructing a new $112 million medical center in Hanford at Seventh Street and Mall Drive with an anticipated 2010 completion date. This new three story facility will contain an emergency department with 26 treatment stations and 142 inpatient beds that will include 120 medical/surgical beds and 22 intensive care unit beds. A future planned expansion area will house an additional 60 beds.

E. Hazardous Waste Generators

Almost every residence and business in Kings County generates hazardous waste. All hazardous wastes present an immediate or long term risk to humans, animals, plants, or the environment. A hazardous waste is a waste that appears on one of the four Resource Conservation and Recovery Act (RCRA) hazardous waste lists and can be a liquid, solid, or contained gas that exhibits one of the four characteristics of a hazardous waste - ignitability, corrosivity, reactivity, or toxicity. Hazardous wastes are often the by product of a manufacturing process or can be a discarded used material, or discarded unused commercial product such as cleaning fluids or pesticides.

Households also contain a large variety of Household Hazardous Wastes (HHW) such as batteries, cleaning chemicals, light bulbs, used motor oil, antifreeze, and mercury containing products, electronics, and medical waste. The average household can accumulate as much as 100 pounds of HHW. Disposal services of HHW are available through the Kings Waste and Recycling Authority who maintains a permanent HHW facility adjacent to the Materials Recovery Facility at 7803 Hanford Armona Road in Hanford.

Many types of businesses generate hazardous waste. Common generators in Kings County include dry cleaners, automobile repair shops, hospitals, exterminators, and photo processing centers. The abundance of hazardous waste generators requires various types of facilities that can recycle this large assortment of waste. In order to ensure the health and safety of residents throughout the County, the potential for hazardous waste generation shall be evaluated on a project by project basis. A determination shall be made as to the extent of financial assurance requirement that is necessary to ensure proper clean up and or restoration of the site.

IV. COMMUNITY SAFETY

The Community Safety component of the *Health and Safety Element* aims to inform the public of public safety measures and services, and establish guidance in addressing areas that may pose safety hazards to residents of the County. This section covers issues relevant to law enforcement, fire protection, emergency medical services, and critical emergency response. Airport safety, evacuation routes, and hazardous materials are addressed, as well as the built environment as a key factor in maintaining community safety. The goals, objectives and policies related to Community Safety support General Plan strategies and four community plans by establishing guidance in the areas of prevention, preparedness and operational maintenance of critical facilities and infrastructure.

A. Law Enforcement

The San Joaquin Valley's continued urban and residential growth will increasingly place additional pressure on cities and counties to accommodate greater populations with limited resources. As more regional planning emphasis is placed on creating more dense urban environments, the safety needs of residents will continue to increase. Crime is already one of the most frequently identified issues in the County's community districts. Crime prevention, preparedness and response are essential to the safety and wellbeing of community residents and must be taken into account as a high priority. County residents have voiced their concerns over safety issues they experience in living within the unincorporated communities. Overwhelmingly, there exists a desire of residents to have a stronger law enforcement presence to make the County a safer place to live, and reduce gang and drug related activity.

Kings County Sheriff's Office

Figure HS - 16 Sheriff Patrol Car

The Kings County Sheriff's Office provides law enforcement response to unincorporated territories of the County. The County is currently divided into six beat districts with five Sheriff substations throughout Kings County. Each beat district has at least one deputy sheriff on duty at all times to serve the unincorporated communities and surrounding County areas. Due to the wide area allocated to beats, some residents have expressed a desire for an increased level of sheriff service within community district areas. Enhanced community safety is essential to long term sustainability and success of these communities. As community populations grow supplementary funds should be considered to support additional Sheriff personnel.

California Highway Patrol

Traffic enforcement along State Highways and County roadways is provided by the California Highway Patrol. Kings County is within the California Highway Patrol's (CHP) Central Division which encompasses the heart of the San Joaquin Valley. The County's CHP area office is located at 1565 Glendale Avenue in Hanford. Southwestern Kings County is covered by the Coalinga CHP area office. In addition to issuing traffic citations for traffic violations, CHP provides other services support the overall safety of residents in the County. They serve to pace traffic along highways during dense fog season, and have implemented the El Protector Program that utilizes Spanish speaking officers that

work with agricultural related businesses on traffic safety education and enforcement. Under this program, officers also respond to traffic fatalities involving the migrant farm labor community. The Central Division also implemented the Skywatch program in 2001 in an effort to reduce accidents involving commercial vehicles. The program uses fixed wing aircraft, RADAR, and LIDAR, to police commercial vehicles and passenger vehicles operating unsafely on State Route 99 and Interstate 5. Both of these programs have successfully reduced the number of accidents in the Central Division.

B. Fire Protection

The County of Kings is susceptible to both urban and wildland fire hazards. Fires occurring in urban or developed areas have the potential to destroy property and structures, and cause injury or loss of life. Urban fire hazards in the County involve areas where single family homes, multi-family homes and/or business facilities are clustered close together, increasing the possibility of rapid spread to another structure. Other potential areas where significant urban fires could occur are characterized by adjoining buildings such as in downtown Armona or Stratford. The cause of fires in urban areas usually includes one of the following:

- Criminal acts (arson, illegal explosive devices, acts of terrorism)
- Residential accidents (improper use of electrical appliances, faulty connections, grease fires, smoking, heating appliances or improper disposal of wood ashes).
- Industrial accidents (hazardous material incidents, explosions, transportation accidents)
- Acts of nature (lightening strikes, earthquake byproduct)

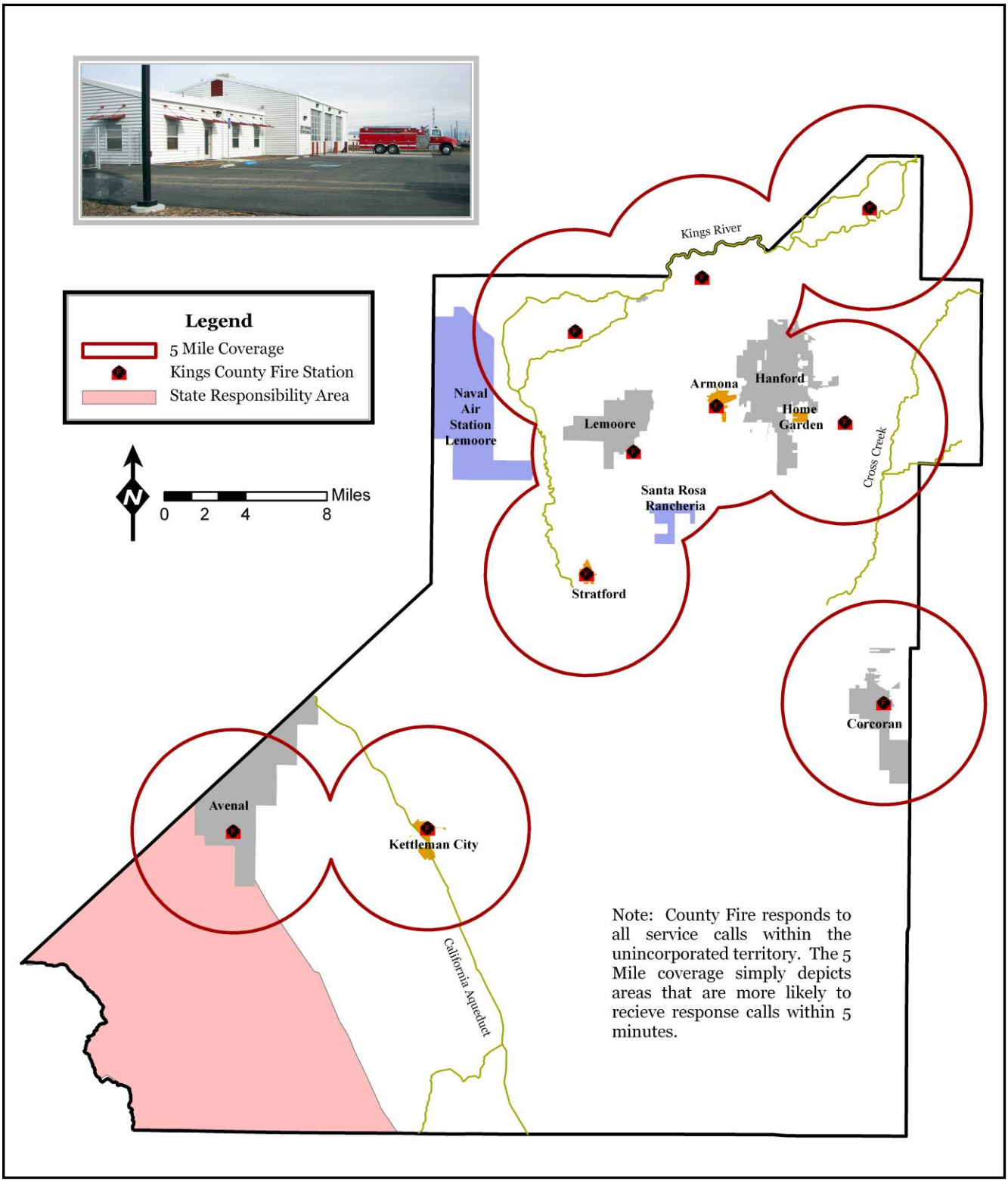
A large urban fire puts a tremendous strain on many of the government safety agencies in the County. Combating large urban fires may require all available firefighters to control the event, while fire departments are still relied on to meet normal demands for service elsewhere. The Kings County Sheriff's department is relied on to provide evacuation activities, traffic and crowd control. Community Service Districts, Public Utility Districts, and the Kings County Public Works Department may be tasked with supplying barricades and a continuous supply of utilities necessary to control the incident. A large fire event may also require roadways to be closed in order to provide efficient access to emergency vehicles.

Kings County Fire Department

Figure HS – 17 County Fire Incident

The Kings County Fire Department serves the unincorporated areas of the County including the four unincorporated communities of Armona, Home Garden, Kettlemen City, and Stratford. The County Fire Department also provides contracted services to the cities of Avenal and Corcoran. Kings County operates ten fire stations and one headquarters, and has a professional staff of 61 employees who are assisted by 10 volunteer companies with approximately 100 volunteer firefighters. Each station conducts assessments of proposed industrial and business facilities to assure compliance with safety and design capacity requirements. Fire stations also handle weed abatement on a complaint basis. Figure HS -18 shows the location and generalized 5-mile coverage radius of each station.

Figure HS -18 Kings County Fire Stations



The Kings County Fire Department maintains a mutual aid agreement with the City of Hanford Fire Department and other outside agency fire departments. Additional fire protection response services in the County include the City of Lemoore Volunteer Fire Department, Naval Air Station Lemoore Fire Department, and Santa Rosa Rancheria Fire. The California Department of Forestry (CDF) also responds to incidents in the State Responsibility Area that is southwest of State Route 33. There are no CDF Stations in Kings County, with the nearest responding stations located in Fresno County and San Luis Obispo County.

Figure HS – 19 County Fire Helicopter

The latest addition to the Kings County Fire Department resources is the Fire Department's Search and Rescue Helicopter. Through an agreement with Rogers Helicopters Inc. based at the Fresno Air Terminal, the County has a Bell 212 Helicopter stationed at the Kings County Fire Station No. 4 Heliport. The Department's Search and Rescue Helicopter is available for use within the County and other outside agencies when available and requested to respond to disasters or other critical incidents. The Kings County Fire Department Heliport located at Fire Station No. 4 also serves as the County's local staging area for SkyLife emergency medical helicopter transport.

In recent years fires in urban areas have not caused large-scale loss of human life. There is always the chance such a disaster could occur, depending upon many interrelated and complex factors, some of which are impossible to predict or prevent. These could include equipment malfunctions, arbitrary human errors, freak weather conditions, or combinations of the three.

Fire regulations are intended to minimize personal injury and property damage, and to reduce the cost of fire suppression services. Increasing the use of built-in fire protection devices such as interior sprinkler systems is the most cost-effective way of achieving these objectives. All urban development is required to have adequate water available for fire suppression, whether from a hydrant and community system or an on-site storage tank. Project review should include an assessment of fire potential and needed mitigation measures. New developments are also required to comply with the *Kings County Improvement Standards* in order to decrease the potential for urban fire hazard. Standards include required minimum road widths, required clearances around structures, and peak load water capacity.

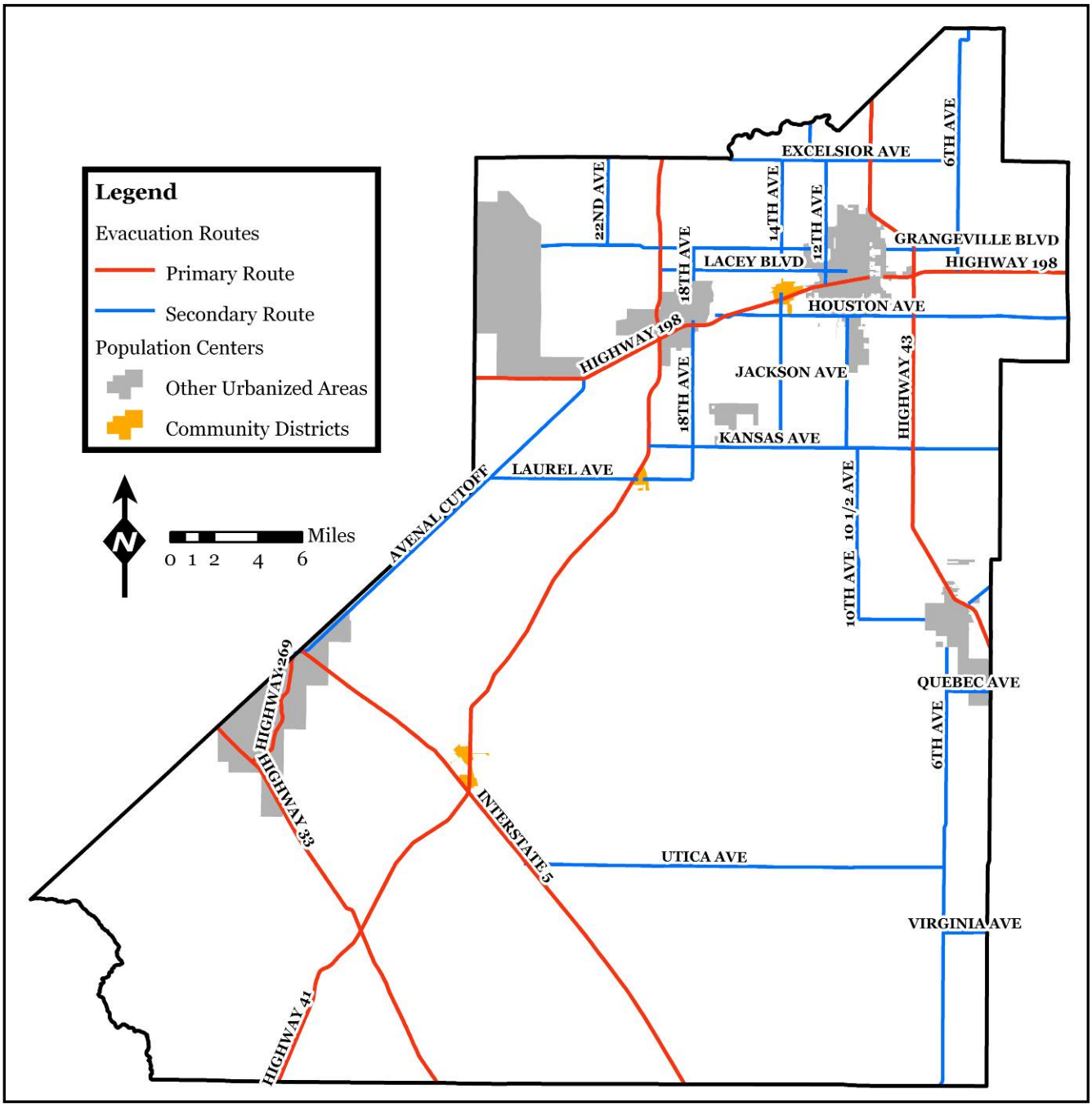
C. Emergency Management

The Kings County Office of Emergency Management (OEM) is located in the County Fire Department Headquarters. This office is responsible for writing and maintaining the County's emergency response plan, providing training, conducting exercises and coordinating the opening and functioning of the Emergency Operations Center (EOC) in the event of a major incident or disaster, such as flood, earthquake or major fires. Alerting and notifying appropriate agencies, coordinating responding agencies and ensuring resources are available and mobilized during times of emergencies is also a duty performed by OEM. The Kings County OEM also supports the four cities of Hanford, Avenal, Lemoore and Corcoran, and all the political subdivisions of the County in their efforts related to emergency preparedness and planning.

The Kings County OEM also works closely with the Governor's Office of Emergency Services to prepare for and mitigate many types of emergencies. They also work with the Federal Emergency

Management Agency to recover from disaster related incidents and to return to a state of normalcy as quickly as possible. In times of emergency or disaster response, the following designated evacuation routes are relied upon. Primary routes are State Highways that can accommodate larger volumes of traffic, while Secondary Routes are County Arterial roadways that provide critical secondary passages in times of emergency. Maintenance of these highway and road segments should remain high priority.

Figure HS – 20 Evacuation Routes



D. Airport Safety

Military Air Installation

Figure HS - 21 Military Aircraft

The Naval Air Station Lemoore (NASL) encompasses 28.5 square miles in the northwestern corner of Kings County and Southwestern Fresno County and includes a military airport and other critical facilities, such as medical facilities. It is also one of the largest employers in the county, with 1,300 civilian employees. Military jet aircraft operations at NASL subject surrounding land uses to high noise levels, and nearby air traffic to potential aircraft accidents. The County has designated the area around the base as Exclusive Agriculture which serves as a Public Safety buffer to ensure the preservation of large and sparsely developed parcels in the area surrounding the base. This designation has proven effective in preventing land use and safety conflicts between the base and the general public. Encroachment by civilian aircraft into military airspace is prohibited unless authorized by the Department of Defense. NASL policies meet and exceed federal regulations governing safe flight altitudes. Further information can be found in the document entitled Air Installation Compatibility Use Zone Studies (AICUZ), a set of land use compatibility guidelines published by the Navy and incorporated herein by reference. In addition this plan recognizes the critical assets of the station and its role in the county's economy and supports the separate emergency management plans developed for base personnel by NASL. The Naval Air Station Lemoore Military Operational Area coverage is also addressed in the *Land Use Element*, and flight noise contours are addressed in the *Noise Element*.

Public Airports

Most of the public safety risk created by airports is related to aircraft flight and operation. The primary hazard to the general public is the possibility of being injured on the ground during an aircraft accident. Federal Aviation Administration requires runway protective zones and height limits on structures near airports to reduce risks to the public. The principal concerns related to airport operations are the safety of the general public and noise compatibility. Airport planning boundaries define areas near airports within which safety or noise restrictions are imposed. Only one airport within the County is identified for public use, the Hanford Municipal Airport. The "Kings County Airport Land Use Compatibility Plan" (ALUCP) addresses the land use compatibility surrounding this airport and is incorporated by reference. Airport Compatibility Maps identify the areas covered under the ALUC surrounding the Hanford Municipal Airport (Figure HS – 22). The City of Hanford is scheduled to prepare an updated Airport Master Plan for the Hanford Municipal Airport and will need to be incorporated into this General Plan and associated land use regulations to ensure consistency in land use decision making.

The Kings County ALUC establishes procedures and criteria by which the County of Kings and the City of Hanford can address compatibility issues when making land use decisions within the operational areas of public use airports. The ALUC criteria are intended to ensure that local general plans, specific plans, and zoning ordinances take into account airport and surrounding land use compatibility. The ALUC land use compatibility criteria is provided in Table HS – 4 and additional criteria notes are listed in Table HS – 5.

Figure HS - 22 Hanford Municipal Airport Compatibility Map

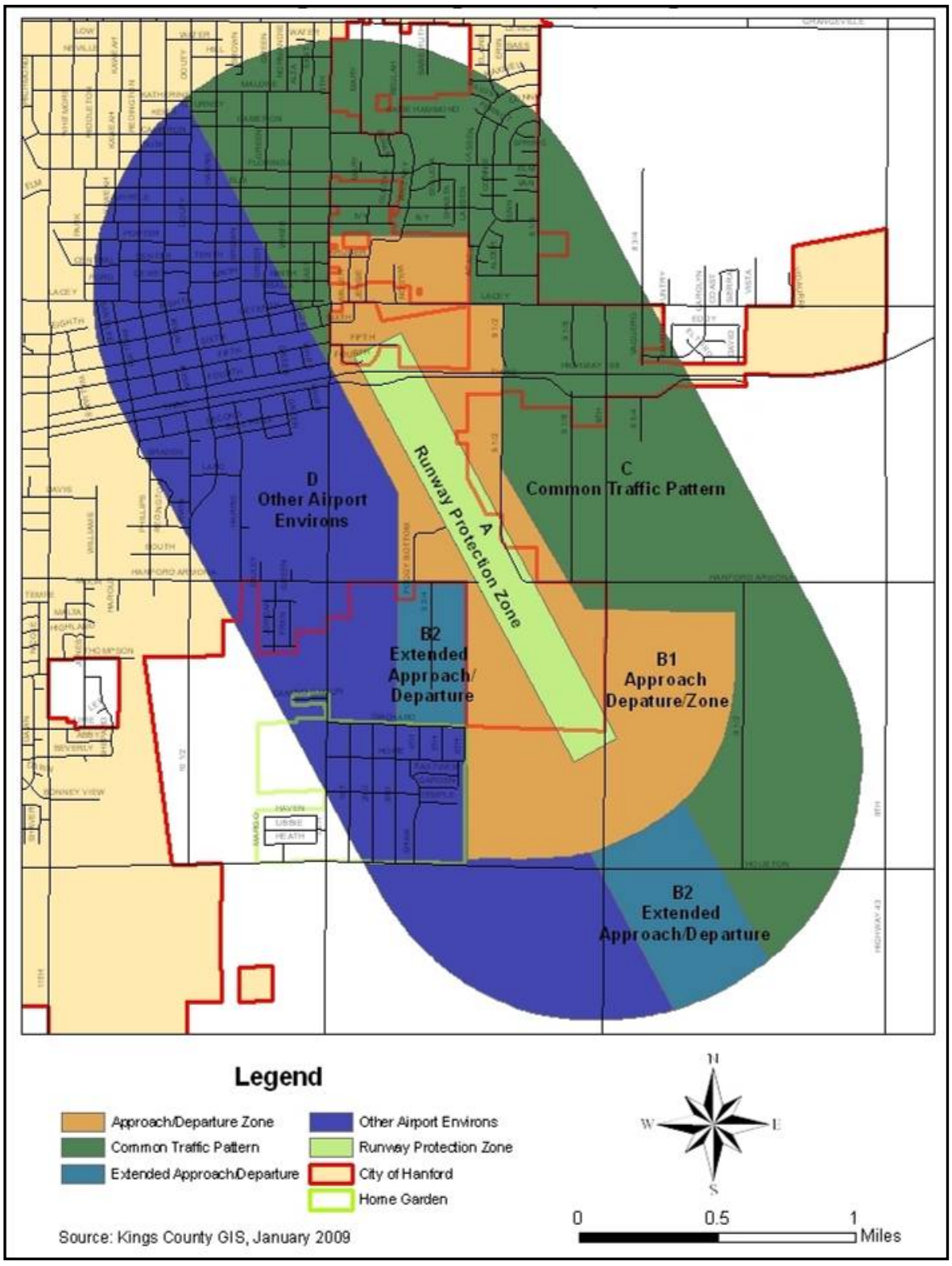


Table HS 4: Primary Compatibility Criteria

Zone	Location	Impact Elements	Maximum Densities		Required Open Land[3]
			Residential (du/ac)[1]	Other Uses (people/ac)[2]	
A	Runway Protection Zone or Within Building Restriction Line	• High Risk • High Noise Levels	0	10	All Remaining
B1	Approach/Departure Zone and Adjacent to Runway	• Substantial risk – aircraft commonly below 400 ft. AGL or within 1,000 ft. of runway • Substantial Noise	0.1 (10 acre parcel)	60	30%
B2	Extended Approach/Departure Zone	• Moderate risk – aircraft commonly below 800 ft. AGL • Significant Noise	0.5 (2-acre parcel)	60	30%
C	Common Traffic Pattern	• Limited risk – aircraft at or below 1,000 ft AGL • Frequent Noise Intrusion	8	150	15%
D	Other Airport Environs	• Negligible risk • Potential for annoyance from overflights	No Limit	No Limit	No Requirement

Zone	Additional Criteria		Examples	
	Prohibited Uses	Other Development Conditions	Normally Acceptable Uses[4]	Uses Not Normally Acceptable[5]
A	• All structures except ones with location set by aeronautical function • Assemblages of people • Objects exceeding FAR Part 77 height limits • Aboveground bulk storage of hazardous materials • Hazards to flight[6]	• Dedication of avigation easement	• Aircraft tie down apron • Pastures, field crops, vineyards • Automobile parking	• Heavy poles, signs, etc. • Orchards, large trees
B1 and B2	• Children's schools, day care centers, libraries • Hospitals, nursing homes • Highly noise-sensitive uses (e.g. outdoor theaters) • Aboveground bulk storage of hazardous materials[7] • Hazards to flight[6]	• Locate structures maximum distance from extended runway centerline • Minimum NLR[8] of 25 dBA in residential and office buildings • Dedication of avigation easement	• Uses in Zone A • Agricultural uses except ones attracting birds • Single-family residences on existing lots • Warehousing, truck terminals, low-intensity manufacturing • Single-story offices • Low-intensity retail (e.g. auto, furniture sales)	• Residential subdivisions • Multi-family residential • Intensive retail uses • Intensive manufacturing or food processing uses • Multiple story offices • Hotels and motels
C	• Children's schools • Hospitals, nursing homes • Hazards to flight[6]	• Dedication of overflight easement for residential uses	• Uses in Zone B • Parks, playgrounds • General retail, offices, etc. (2-story maximum) • Low-intensity manufacturing, food processing • Two-story motels	• Major shopping malls • Theaters, auditoriums • Large sports stadiums • Hi-rise office buildings
D	• Hazards to flight[6]	• Deed notice required for residential development	• All except ones hazardous to flight	

Source: Kings County Airport Land Use Compatibility Plan

Table HS 5: Primary Compatibility Notes

	Notes:
1	Residential development should not contain more than the indicated number of dwelling units per gross acre. Clustering of units is encouraged as a means of meeting the Required Open Land requirements.
2	The land use should not attract more than the indicated number of people per acre at any time. This figure should include all individuals who may be on the property (e.g. employees, customers/visitors, etc.) These densities are intended as general planning guidelines to aid in determining the acceptability of proposed land uses.
3	Open land requirements are intended to be applied with respect to an entire zone. This is typically accomplished as part of a community general plan or a specific plan. See supporting compatibility policies on safety for definition of open land.
4	These uses typically can be designed to meet the density requirements and other development conditions listed.
5	These uses typically do not meet the density and other development conditions listed. They should be allowed only if a major community objective is served by their location in this zone and no feasible alternative location exists.
6	Hazards to flight include physical, visual, and electronic forms if interference with the safety of aircraft operations. See supporting compatibility policies on airspace protection for details.
7	Storage of aviation fuel, other aviation-related flammable materials, and up to 2,000 gallons of no aviation flammable materials is exempted from this criterion in Zones B1 and B2.
8	NLR = Noise Level Reduction; i.e., the attenuation of sound level from outside to inside provided by the structure.
Source: Kings County Airport Land Use Compatibility Plan	

Private Airstrips

Much of the use of private aircraft in Kings County is related to agriculture, either for crop dusting or private transportation over long distances. A significant number of local private aircraft are used for student pilot training and trips related to recreation and business; about 75 such aircraft are based at the Hanford airport. Kings County regulations permit private-use noncommercial airports and heliports only in areas separated from urban concentrations for public safety that are designated General Agriculture. Airports and heliports, including crop dusting strips and accessory structures intended for commercial agricultural uses, may be permitted as a conditional use.

E. Built Environment And Safety

The built environment and the manner in which it is laid out plays a key role in either the prevention or encouragement of crime related activities. The actual safety and perception of safe environments by residents is critical to the success of establishing walkable communities and residents' engagement in outdoor physical activities. As more emphasis is placed on more dense and compact development, the need for safe community environments increases. The County's four community plans that address specific community needs have established policy guidance to facilitate improvements in the built environment and thereby work towards enhancing community safety. Efforts are directed toward increasing the "eyes on the street" and establishment of safe pedestrian passages to increase safety as well as health within each community. The "Crime Prevention Through Environmental Design" (CPTED) is also recommended to incorporate "the proper design and effective use of the built environment to reduce fear and potential incidences of crime, and improve the quality of life.

The CPTED program's primary goal is to prevent crime through designing a physical environment that positively influences human behavior. CPTED designed principles when implemented serve as deterrents to crime as criminals perceive community areas as higher risk for committing a crime. The increased visibility and associated crime deterrent increase residents and visitors reliability in community's safety and protection.

The Four Strategies of CPTED

1. Natural Surveillance - A design concept directed primarily at keeping intruders easily observable. Promoted by features that maximize visibility of people, parking areas and building entrances: doors and windows that look out on to streets and parking areas; pedestrian-friendly sidewalks and streets; front porches; adequate nighttime lighting.

2. Territorial Reinforcement - Physical design can create or extend a sphere of influence. Users then develop a sense of territorial control while potential offenders, perceiving this control, are discouraged. Promoted by features that define property lines and distinguish private spaces from public spaces using landscape plantings, pavement designs, gateway treatments, and "CPTED" fences.

3. Natural Access Control - A design concept directed primarily at decreasing crime opportunity by denying access to crime targets and creating in offenders a perception of risk. Gained by designing streets, sidewalks, building entrances and neighborhood gateways to clearly indicate public routes and discouraging access to private areas with structural elements.

4. Target Hardening - Accomplished by features that prohibit entry or access: window locks, dead bolts for doors, interior door hinges.

Pedestrian and Bicycle Safety

Safe pedestrian and bicycle movement within the County's four community districts is a key component of the smart growth strategies embodied in the four community plans. Community streets and related infrastructure are important public resources that not only provide channels for moving vehicular traffic, but also make alternative transportation possible for bicyclists as well as providing even surfaces for the physically disabled, school children and residents. These types of infrastructure play a key role in the health and wellbeing of residents by providing a means for various recreation activities or cardiovascular exercises such as walking, jogging and rollerblading. Complete streets with sidewalks and planting strips also play a vital role in creating a pleasant aesthetic environment which reinforces resident value in their neighborhoods. Neighborhoods streets provide opportunities for community interaction, resident exercise and children play. The County's streets and roads are extensively used by non-motorized users resulting in the requirement for our roads to be safe for all users. The California Vehicle Code reinforces this requirement by specifying in Section 21949 that "safe and convenient pedestrian travel and access, whether by foot, wheelchair, walker, or stroller be provided to the residents of the state."

Continuous sidewalks and safe crossings are the basic building blocks for pedestrian safety. The four community plans establish a policy foundation aimed at improving alternative transportation safety and directs the County to lead efforts in obtaining "Safe Routes to School" funding that will implement traffic calming features at key intersections utilized by elementary school children. These efforts are intended to reduce traffic speeds and increase pedestrian safety.

Pedestrian safety does not stop on the pavement, it transcends to all public spaces and off-street paths. Many pathways currently exist in the four communities and used for alternative transportation by residents on errands or children traveling to school. Through implementation of the CPTED program and other pedestrian safety efforts, the four community districts can begin to establish safe and attractive public spaces and pathways for pedestrians that will encourage the use of alternative transportation.

F. Hazardous Materials

Figure HS - 24 DOT Placard

A material is considered hazardous if it appears on a list of hazardous materials prepared by a federal, state, or local agency, or if it has characteristics defined as hazardous by such an agency. The California Code of Regulation (CCR) defines a hazardous material as "a substance that, because of physical or chemical properties, quantity, concentration, or other characteristics, may either (1) cause an increase in mortality or an increase in serious, irreversible, or incapacitating illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of, or otherwise managed (CCR, Title 22, Division 4.5, Chapter 10, Article 2, Section 66260.10). Hazardous materials have been and are commonly used in commercial, agricultural, and industrial application, and to a limited extent in residential areas.

Although reduction efforts and treatment methods have reduced waste generation, it is certain that hazardous wastes will continue to be produced. Therefore, it is important that emergency response procedures detailed in the "Kings County Area Plan For Hazardous Materials Emergency Response" be observed.

The County of Kings "Kings County Area Plan For Hazardous Materials Emergency Response" also identifies specific agencies and their responsibilities during an emergency and caused by accidental transportation, pipeline, and industrial releases of hazardous material. This plan establishes the County policy which holds that funding for cleanup activities is the responsibility of the party which releases hazardous materials.

The handling and storage of hazardous waste are regulated by state and federal statute. Operators of commercial and industrial uses are required to register with the local administering agency (the Kings County Health Department, Division of Environmental Health). Handlers of acutely hazardous materials in excess of federal standards are additionally required to submit hazardous waste materials business plans to the local agency. Business plans are then used by government safety agencies, such as a fire department, during emergencies to identify the quantity and location of hazardous materials stored onsite.

Efforts to decrease the production of hazardous wastes help lessen the burden on existing hazardous waste management facilities, but additional disposal capacity is expected to be needed in the future in Kings County and throughout the state. For this reason, the *Kings County General Plan* was amended in 1990 to include policies as to specific sites and sitting criteria for hazardous waste facilities.

The Kings County Hazardous Waste Management Plan describes the capacity of the Chemical Waste Management, Inc., Kettleman Hills hazardous waste management facility, located in Kings County

approximately three miles west of Kettleman City, which accepts hazardous wastes from most of the counties in California and from surrounding States.

V. HEALTH AND SAFETY POLICIES

Health and Safety Element policies are organized according to three sub-sections, Natural Hazards, Community Health, and Community Safety.

A. Natural Hazards

HS GOAL A1 **Preventative measures reduce the potential impacts of natural hazards upon peoples lives, property, and the environment.**

HS OBJECTIVE A1.1
Coordinate County General Plan Health and Safety Element updates with the Kings County Multi-Jurisdictional Multi-Hazard Mitigation Plan.

HS Policy A1.1.1: **Collaborate with the Kings County Office of Emergency Services to conduct joint updates of the Kings County Multi-Jurisdictional Multi-Hazard Mitigation Plan and the *Health and Safety Element* of the County's General Plan.**

HS Policy A1.1.2: **Integrate mitigation measures of the Kings County Multi-Jurisdictional Multi-Hazard Mitigation Plan into the *Health and Safety Element* policies where applicable and relevant to County operational areas of responsibility.**

HS OBJECTIVE A1.2
Promote education and awareness of natural hazard risks, mitigation, and preparedness to citizens, public agencies, elected officials, nonprofit organizations, and businesses.

HS Policy A1.2.1: **Assist the Kings County Office of Emergency Services in developing and implementing comprehensive strategies to improve ongoing public education regarding natural hazards and emergency preparedness.**

HS OBJECTIVE A1.3
Limit growth and development in hazard areas to minimize new areas susceptible to higher risk of natural hazards.

HS Policy A1.3.1: **Implement natural hazards review criteria for new development that is based upon information provided in the Natural Hazards Section of the *Health and Safety Element* to improve long term loss prevention.**

HS OBJECTIVE A1.4
Maintain County building and construction standards and regulations to remain current with State and Federal requirements that serve to protect residents from natural hazards.

HS Policy A1.4.1: **Implement the current California Building Codes and any subsequent amendments as contained within California Code of Regulations Title 24 to improve disaster resistance of future buildings.**

HS Policy A1.4.2: **Update the Kings County Flood Damage Prevention Ordinance as new flood information and/or relevant 2009 changes to FEMA references occur, including new FEMA digital flood insurance rate maps.**

HS OBJECTIVE A1.5
Increase communication regarding hazard mitigation among communities in the County, and improve organizational capabilities to address health and safety issues in mitigation and response.

HS Policy A1.5.1: **Maintain and enhance the County's centralized Geographic Information System (GIS) as a common multi-jurisdictional resource to improve capabilities in mitigation, preparedness, and response for all hazards.**

HS Policy A1.5.2: **Support Kings County Emergency Services operations that improve countywide coordination, monitoring and implementation of the Kings County Multi-Jurisdictional Multi-Hazard Mitigation Plan.**

HS GOAL A2 **Minimize loss of life and personal property caused by geologic hazards.**

HS OBJECTIVE A2.1
Regulate new construction to achieve acceptable levels of risk posed by geologic hazards.

HS Policy A2.1.1: **Maintain and enforce current building codes and standards to reduce the potential for structural failure caused by ground shaking and other geologic hazards.**

HS Policy A2.1.2: **Use the 1997 Uniform Code for the Abatement of Dangerous Buildings of a non-residential nature, and the 1997 Uniform Housing Code to assess unsafe residential structures and ensure their safe construction and rehabilitation.**

HS Policy A2.1.3: **Prohibit new construction along known fault zones, and limit uses to nonstructural land uses.**

HS Policy A2.1.4: **Review all development proposals to determine whether a geotechnical soils report is required for new construction.**

HS Policy A2.1.5: **Consider the environmental review process for land use projects seismic hazards, including subsidence, liquefaction, flooding, local soils, and geologic conditions.**

HS Policy A2.1.6: **Require agriculture or open space land uses around areas identified as engaging in potentially hazardous activities to serve as a buffer that reduces possible personal or property damage resulting from an earthquake.**

HS GOAL A3 **Minimize impacts of extreme weather related natural disasters to agriculture and the economies of communities.**

HS OBJECTIVE A3.1

Prepare for long term countywide drought conditions by encouraging water conservation measures among urban, rural, and agricultural users, and increase regional water storage capacity to enhance groundwater recharge and capture of floodwater.

HS Policy A3.1.1: **Support the continued coordinated efforts of the Kings County Water Commission to seek countywide solutions to the ongoing water supply challenges facing urban, rural and agricultural water users within the County.**

HS Policy A3.1.2: **Improve coordination, planning, and investment in long-term water supplies to meet demands of ongoing growth and development.**

HS OBJECTIVE A3.2

Establish plans and procedures to mitigate against the impacts resulting from extreme temperatures.

HS Policy A3.2.1: **Support the maintenance and implementation of the Kings County Extreme Heat Emergency Plan to support vulnerable populations and address human safety preparation activations for when temperatures exceed 105°F.**

HS Policy A3.2.2: **Support the maintenance and update of the "Kings County Emergency Action Plan for Dead Animal Management" to maintain consistency with the *Dairy Element* and ensure proper disposal of excess livestock fatalities resulting from extreme heat events.**

HS GOAL A4 **Prevent unnecessary exposure of people and property to flood damage.**

HS OBJECTIVE A4.1
Direct new growth away from designated flood hazard risk areas, and regulate new development to reduce the risk of flood damage to an acceptable level.

HS Policy A4.1.1: **Review new development proposals against current Federal Emergency Management Agency (FEMA) digital flood insurance rate maps and California Department of Water Resource special flood hazard maps to determine project site susceptibility to flood hazard.**

HS Policy A4.1.2: **Reserve FEMA designated flood hazard areas for agricultural and natural resource conservation uses along the floodway channels and Tulare Lake Basin.**

HS Policy A4.1.3: **Determine base flood elevations for new development proposals within or adjacent to 100 year flood zone areas as identified in latest FEMA Digital Flood Insurance Rate Map, to definitively assess the extent of property potentially subject to onsite flood hazards and risks.**

HS Policy A4.1.4: **Direct new urban growth to existing cities and community districts, or away from New Community Discouragement Areas to avoid flood hazard areas and increased risk to people and property.**

HS Policy A4.1.5: **Regulate development, water diversion, vegetation removal, and grading to minimize any increase in flood damage to people and property.**

HS Policy A4.1.6: **New development shall provide onsite drainage or contribute towards their fair share cost of off-site drainage facilities to handle surface runoff.**

HS Policy A4.1.7: **Consider and identify all areas subject to flooding in the review of all land divisions and development projects.**

HS Policy A4.1.8: **Enforce the "Kings County Flood Damage Prevention Ordinance," Chapter 5A of the Kings County Code of Ordinances.**

HS Policy A4.1.9: **Emphasize the need for State and Federal funding to address the increased FEMA Flood damage risk resulting from expanded 100 year flood zones as made effective for Kings County on June 16, 2009.**

B. Community Health

HS GOAL B1 **Promote the health and well being of County residents, and support healthy living environments, physical activity opportunities, medical services, and readily available nutritious food sources.**

HS OBJECTIVE B1.1
Integrate smart growth principles into unincorporated community design to facilitate living environments that are both healthier and safer for residents and conducive to economic revitalization and reinvestment.

HS Policy B1.1.1: **Develop and maintain Community Plans for each Community District within the County to integrate locally defined smart growth implementation measures that are specific to the uniqueness of each community via community input.**

HS Policy B1.1.2: **Centralize a variety of uses and community services within Community Districts to increase accessibility, reduce traffic, and focus investment in community infrastructure and facilities.**

HS Policy B1.1.3: **Integrate Mixed Use in the central community cores of community districts to accommodate a mix of residential, commercial and office type uses.**

HS Policy B1.1.4: **Prioritize infill development within community districts throughout the County to increase efficient use of vacant land.**

HS Policy B1.1.5: **Support healthy aging in place and childhood development by promoting safe, "complete" streets, and a range of housing types and affordability within each community district.**

HS Policy B1.1.6: **Balance commercial and residential development within Community Districts and develop strategies to match jobs to existing resident's skills to reduce the number of people who must commute long distances to work.**

HS OBJECTIVE B1.2
Encourage and facilitate the provision of healthy eating options within community commercial core areas and increase County resident access to locally grown fresh produce.

HS Policy B1.2.1: **Support long term preservation and sustainability of regional farmland as a significant source of locally grown healthy food sources that are beneficial to residents of the County.**

HS Policy B1.2.2: **Support the establishment of farmers markets, community gardens and other commercial sales venues within community districts to provide increased availability of fresh fruits and vegetables.**

HS Policy B1.2.3: **Encourage the establishment of restaurants in community districts that serve locally grown foods and products.**

HS Policy B1.2.4: **Discourage the over concentration of fast food eateries, liquor and convienence stores in community district core areas.**

HS Policy B1.2.5: **Support strategies that capitalize on the mutual benefit and connection between rural economies as food producers and urban economies as processors and consumers.**

HS OBJECTIVE B1.3

Maintain existing community parks and facilitate the establishment of physical activity areas within underserved community districts.

HS Policy B1.3.1: **Inventory and evaluate existing community district park resources for sustainability and need for long term maintenance.**

HS Policy B1.3.2: **Guide construction of the built environment within community districts to contribute toward the increase in physical activity and neighborly atmosphere to reduce the incidence of chronic disease.**

HS Policy B1.3.3: **Ensure that new parks and recreational facilities within community districts are established with a sound fiscal foundation for long term maintenance support.**

HS Policy B1.3.4: **Support community oriented projects with public, quasi-public and private efforts to establish youth and adult recreation opportunities in the community.**

HS Policy B1.3.5: **Encourage the joint use of school facilities for recreational and other community benefiting service and program activities within Community Districts.**

HS Policy B1.3.6: **Require commercial and residential infrastructure to support daily physical activity through interconnected walking and biking opportunities.**

HS OBJECTIVE B1.4
Provide local health services and emergency medical services in the County's Community Districts to meet the needs of a growing population.

HS Policy B1.4.1: **Transport to hospitals and emergency medical care is supported by timely response from ambulance or emergency helicopter transport.**

HS Policy B1.4.2: **Placement of rural clinic services is prioritized for location within Community Districts where concentrations of County residents reside and transit routes connect.**

HS Policy B1.4.3: **Ensure that County Fire Department personnel remain trained and equipped to provide emergency medical services to those in need of such services within the unincorporated areas of the County.**

HS OBJECTIVE B1.5
Ensure adequate protection of County residents from new generations of toxic or hazardous waste substances.

HS Policy B1.5.1: **Evaluate development applications to determine the potential for hazardous waste generation and be required to provide sufficient financial assurance that is available to the County to cover waste cleanup and/or site restoration in instances where the site has been abandoned or the business operator is unable to remove hazardous materials from the site.**

C. Community Safety

HS GOAL C1 **Ensure the protection and well being of residents, visitors and businesses that enables long term sustainability for future generations.**

HS OBJECTIVE C1.1
Establish safe routes for pedestrians and bicyclists within the community districts.

HS Policy C1.1.1: **Develop and implement street design guidelines for each community district to create walkable, safe and pleasant environments.**

HS Policy C1.1.2: **Involve resident input into Community Planning activities to identify and define unsafe pedestrian routes and crossings to prioritize needed infrastructure improvements.**

HS Policy C1.1.3: **Implement traffic calming measures at key interchanges and routes to schools to improve street safety and access.**

HS Policy C1.1.4: **Pursue funding through Federal, State and Local sources to enhance pedestrian safety at key intersections within community districts.**

HS Policy C1.1.5: **Priority for Animal Control services should be directed to the County's community districts to promptly remove stray animals and keep routes safe for pedestrians and school children.**

HS OBJECTIVE C1.2

Enhance overall community safety by placing more emphasis on preventative measures to reduce crime, including the incorporation of crime prevention features in the built environment of each community to increase overall safety of residents and visitors within these communities.

HS Policy C1.2.1: **Encourage new development to integrate Crime Prevention Through Environmental Design (CPTED) strategies and applications to enhance crime prevention in the County's Community Districts and serve as deterrents to crime.**

HS Policy C1.2.2: **Coordinate community planning efforts with the County Sheriff's Department to build a sustainable positive law enforcement presence that results in safer living environments within community districts.**

HS Policy C1.2.3: **Support community policing, neighborhood watch, and other law enforcement efforts that engage community residents.**

HS Policy C1.2.4: **Support programs aimed at intervention with at risk youth as a preventative measure to reduce future crime potential.**

HS Policy C1.2.5: **Invest in community planning efforts that aim to reverse trends of community deterioration and blight which lead toward the decline of personal and property safety within the County's community districts.**

HS GOAL C2 **Support Countywide safety through adequate law enforcement, quality fire protection, emergency preparedness, and accessibility in times of emergency.**

HS OBJECTIVE C2.1

Provide sufficient law enforcement presence within each community district and other unincorporated areas of the County to protect residents, businesses, and visitors from personal and property crimes.

HS Policy C2.1.1: **Develop community plans that explore community safety programs, such as implementation of a Citizens on Patrol program or Neighborhood Watch program.**

HS Policy C2.1.2: **Promote community safety by ensuring communities have sufficient sheriff coverage to provide 20 minute or faster response times to priority emergency calls.**

HS Policy C2.1.3: **Evaluate new development within community districts to determine the extent of impact upon the Sheriff's Department ability to provide adequate patrols necessary to cover the additional population.**

HS Policy C2.1.4: **The Sheriff's Department should encourage Deputies assigned to community districts to participate in the community's functions and activities to build rapport with residents and reinforce a law enforcement presence.**

HS OBJECTIVE C2.2

Provide quality fire protection services throughout the County by the Kings County Fire Department, and Fire safety preventative measures to prevent unnecessary exposure of people and property to fire hazards in both County Local Responsibility Areas and State Responsibility Area.

HS Policy C2.2.1: **Community planning efforts should evaluate the projected need for Fire Department personnel and equipment and necessary funding support to maintain current levels of service as community growth occurs.**

HS Policy C2.2.2: **Development proposals and code revisions shall be referred to the County Fire Department for review and comment.**

HS Policy C2.2.3: **Use the 1997 Uniform Code for the abatement of Dangerous Buildings. All new structures to be occupied shall be built to current Fire Code Standards.**

HS Policy C2.2.4: **Review development proposals according to California Department of Forestry and Fire Protection "Fire Hazard Severity Zone Maps" to determine whether a site is located within a Very High Fire Hazard Severity Zone and subject to Wildland-Urban Interface Fire Area Building Standards and defensible space requirements as adopted under Senate Bill 1595 and effective January 1, 2009.**

HS Policy C2.2.5: **Forward for review and comment all proposed structures within the State Responsibility Area to the California Department of Forestry and Fire Protection within all State Responsibility Areas.**

HS OBJECTIVE C2.3

Emergency Operations Center remains prepared, organized and capable of responding to disasters or incidences of a significant nature or magnitude that require coordinated multi-agency response.

HS Policy C2.3.1: **The Kings County Office of Emergency Management maintains and updates the County's Emergency Response Plan in coordination with responding County agencies that serve to perform Management, Operations, Planning and Intelligence, Logistics, and Administration and Finance functions.**

HS Policy C2.3.2: **The Kings County Emergency Service Coordinator continues to organize Emergency Operations Center (EOC) training and exercises for relevant County Department staff to maintain readiness.**

HS Policy C2.3.3: **Geographic Information System (GIS) Section staff of the Kings County Community Development Agency participate in EOC training and maintain GIS data and applications for compatibility with EOC operations.**

HS OBJECTIVE C2.4

Ensure maintenance and upkeep of key emergency access routes, and critical facilities and infrastructure to minimize delays or disruptions in emergency response.

HS Policy C2.4.1: **Prioritize the maintenance of Primary Access Routes, as defined by the County's Emergency Response Plan, which serve as established disaster evacuation routes.**

HS Policy C2.4.2: **Improve lighting and traffic controls at critical intersections and roadways to improve safety during fog events.**

HS Policy C2.4.3: **Assess vulnerability of critical infrastructure and lifeline utilities, including water distribution systems, to identify and prioritize projects for multi-hazard risk reduction.**

HS GOAL C3 **Ensure Naval Air Station Lemoore, public airports and special use heliports remain operationally effective and free from encroachment of incompatible land uses, while surrounding land use compatibility serves to protect people and property from unnecessary exposure and hazards related to aircraft.**

HS OBJECTIVE C3.1
Maintain a restricted land use buffer around the Naval Air Station Lemoore to prevent encroachment of incompatible land uses, and engage in coordinated efforts to plan for long term operations and safety.

HS Policy C3.1.1: **Reference the Naval Air Station Lemoore (NASL) Military Operational Area (MOA) and Air Installation Compatible Use Zones (AICUZ) in establishing land use policies within three miles of the base.**

HS Policy C3.1.2: **Apply the Exclusive Agriculture as the "Agriculture for Public Safety" land use designation where NASL aircraft operations cross over County unincorporated territory and potentially pose safety hazards to people and property, and prohibit the creation of any homesite on property less than 40 acres in size. Exceptions to this policy shall include the creation of a farm home retention or transfer of title as established in *Land Use Element* Policy B4.3.1 and Policy B4.3.2.**

HS Policy C3.1.3: **Participate in a Joint Land Use Study with NASL to enhance coordinated land use efforts.**

HS OBJECTIVE C3.2
Increase public safety by designating an "Airport Area of Influence" around public airports and implementing the policies of the "Kings County Airport Land Use Compatibility Plan."

HS Policy C3.2.1: **Integrate by reference the Kings County Airport Land Use Compatibility Plan, Compatibility Criteria, and associated maps and procedural policies.**

HS Policy C3.2.2: **Regulate properties adjacent to the Hanford Municipal Airport according to the Primary Compatibility Criteria of the *Health and Safety Element*, and Kings County Airport Land Use Compatibility Plan maps.**

HS Policy C3.2.3: **Work with the City of Hanford to achieve consistent city and county land use policies for areas surrounding the Hanford Airport.**

HS OBJECTIVE C3.3

Maintain sufficient operational area clearance for the Kings County Fire Department Heliport that serves Kings County Fire Department Search and Rescue helicopter and contracted helicopter ambulance services which are critical to emergency response and safety of people within the region.

HS Policy C3.3.1: **Critically review new development proposals within a quarter mile of the Kings County Fire Department heliport to ensure compatibility of structures and uses with the operation of helicopters at County Fire Station No. 4.**

VI. IMPLEMENTATION

This section provides *Health and Safety Element* Implementation Programs.

Health and Safety Program 1:

Integrate Federal Emergency Management Agency (FEMA) digital flood insurance rate maps and California Department of Water Resource special flood hazard maps into the County's land use planning and development review processes.

Health and Safety Program 2:

Update the County's Flood Damage Prevention Ordinance and continue processing applications within the flood zone pursuant to those requirements (Chapter 5A of the Kings County Code of Ordinances).

Health and Safety Program 3:

Conduct a Joint Land Use Study with the Lemoore Naval Air Station, City of Lemoore, and County of Fresno to develop recommended land use strategies to maintain base operations and local land use authority. Integrate recommended General Plan policy changes were appropriate.

Health and Safety Program 4:

Implement Community Plans as a means to increase community health and safety of residents.