December 2012

Kings County Multi-jurisdictional Local Hazard Mitigation Plan

Including the Participating Jurisdictions of the Cities of Avenal, Corcoran, Hanford and Lemoore

Acknowledgements

Howell Consulting would like to thank those Departments and Agencies who participated in the planning and development of this document, particularly Trudy Maletta, retired (2012) Kings County Office of Emergency Management.

The official Kings County Local Hazard Mitigation Planning Team provided the oversight and dedication to this project that was required and without their commitment; this project would not be possible. The Planning Team members are as follows:

LHMP Planning Team Members

Trudy Maletta	Kings County Office of Emergency Management
Courtney Espinoza	Kings County Office of Emergency Management
Michelle Speer	Kings County Office of Emergency Management
Chief William Lynch	Kings County Fire Department
Mike Virden	Kings County Fire Department
Supervisor Joe Neves	Kings County Board of Supervisors
Alex Torres	Tachi Palace Hotel and Casino
Tim Niswander	Kings County Department of Agriculture
Chief Tim Ironimo	City of Hanford
Greg Gatzka	Kings County Community Development Agency
Chuck Kinney	Kings County Community Development Agency
Jeremy Kinney	Kings County Community Development Agency
Angie Sorrento	Kings County Office of Education
Chief Jack Amoroso	City of Avenal
Pat Mundy	City of Lemoore
Gary Cramer	City of Corcoran

Howell Consulting Team

Brenna Howell	Project Manager
Neal O'Haire	Lead Planner/Facilitator
Jim Kniss	Mapping Coordinator

As with any working plan, this revision represents planning strategies and guidance as understood as of the date of this plan's release. This plan identifies natural hazards and risks and identifies the hazard mitigation strategy to reduce vulnerability and should assist the communities of Kings County to be more disaster resistant and sustainable.

Formal Plan Adoption Documentation

Kings County and the following jurisdictions Avenal, Corcoran, Hanford and Lemoore will submit this 2012 Kings County Multi-jurisdictional Local Hazard Mitigation Plan (LHMP) to the Kings County Board of Supervisors and the City Councils upon successful completion of state and federal review and conditional approval. Kings County wishes to receive approval pending adoption. The plan will be submitted to the Board of Supervisors/City Councils as a regularly scheduled agenda item with room for additional public and departmental comment.

(Resolution from Kings County adopting the LHMP inserted here)

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Introduction and County Overview

Introduction and Purpose of Plan

Each year, natural disasters in the United States take the lives of hundreds of people and injure thousands more. Nationwide, taxpayers pay billions of dollars each year to help communities, organizations, businesses, and individuals recover from disasters. These losses only partially reflect the true cost of disasters, because additional expenses to insurance companies and nongovernmental organizations are not reimbursed by tax dollars. Additionally, many natural disasters are predictable. Many more are repetitive, often with the same results. Many of the damages caused by these events can be alleviated or even eliminated.

The Federal Emergency Management Agency (FEMA) has made reducing losses from natural disasters one of its primary goals. Hazard mitigation planning and subsequent implementation of projects, measures, and policies developed through those plans, is the primary mechanism in achieving these goals. Mitigation planning has resulted in the implementation of projects that have successfully reduced disaster damages.

This revised plan was developed pursuant to the regulations of the Disaster Mitigation Act (DMA) of 2000. The DMA revises the Robert T. Stafford Disaster Relief and Emergency Assistance Act by adding Section 322, which provides new and revitalized emphasis on hazard mitigation, including a new requirement for local mitigation plans. These new local mitigation planning regulations are implemented through 44 CFR Part 201.6.

The DMA requires state and local governments to develop multi-hazard mitigation plans to maintain their eligibility for certain federal disaster assistance and hazard mitigation funding programs. Communities at risk from natural disasters cannot afford to jeopardize this funding.

More importantly, 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 and its participating jurisdictions have been affected by several disasters in the past and are committed to reducing disaster impacts and maintaining eligibility for federal mitigation grant funding.

What's New in the 2012 LHMP?

Santa Rosa Rancheria/Tachi Yokut Tribe

The Santa Rosa Rancheria and the Tachi Yokut Tribe have elected to participate in the 2012 LHMP planning process to continue their participation and partnership with the County and other jurisdictions and agencies, **however they are not seeking multi-jurisdictional approval.** Representatives from the Tachi Yokut Tribe's Public Safety Division actively participated in the planning process and provided critical information in the development of their Community Profile Annex, **the Tribe does not wish to seek approval at this time, however, they will continue to participate in the overall planning process**. The Tribe identified some mitigation activities/actions that they would like to complete in the future in partnership with Kings County should there be opportunity.

Update on the 2007 Mitigation Projects
Since the initial plan was adopted in 2007, Kings County and the participating jurisdictions have completed several of the mitigation actions outlined in the initial 2007 plan. The Planning Team also reviewed the incomplete projects from the 2007 plan and has created a revised implementation plan for each action, which identifies priority level, background information, responsible agency, timeline, cost estimate, potential funding sources, and more. A list of those projects is located in Element D.

AB 2140 Compliance
The revised and updated LHMP was prepared in coordination with the Kings County Community Development Agency's Health and Safety Element of the Kings County General Plan, as the planning effort has many common overlapping issues. The LHMP and Health and Safety Element are considered complimentary documents that address natural hazards and works toward enhancing mitigation efforts.

Goals and Objectives

The Planning Team voted to retain the goals and objectives listed in the 2007 LHMP to ensure consistency for the projects carried over from that plan into this planning effort. These goals and objectives were still consistent with the overall direction of the county regarding mitigation efforts and based upon the risk assessment completed. Those goals and objectives are as follows:

Goal 1 Reduce impacts of natural hazards to life, property, and the environment

- Promote education and awareness about natural hazards risk, mitigation, and preparedness to citizens, public agencies, elected officials, nonprofit organizations, and businesses.
- Ensure protection and enhancement of key emergency access routes.
- Protect critical facilities and infrastructure to minimize loss of critical services.
- Minimize growth and development in hazard areas.
- Continue to improve enforcement of existing standards and regulations.

Goal 2 Minimize impacts of natural disasters to agriculture and the economies of Communities

- Encourage water conservation measures among urban, rural, and agricultural users.
- Increase water storage to mitigate flooding and drought.
- Develop plans for post-disaster recovery.
- Strengthen disaster resistance and resiliency of major employers.

Goal 3 Implement identified mitigation activities

- Promote hazard mitigation as integrated policy among communities in the county and with the region and state.
- Increase communication regarding hazard mitigation among communities in the county.
- Seek funding sources and partners for future mitigation activities.
- Improve organizational capabilities to address health and safety issues in mitigation and

- Response.

To meet identified goals and objectives, the plan recommends 26 mitigation actions; those mitigation actions are located in Element C and in each of the jurisdictional annexes.

Scope

Hazard mitigation is defined as sustained action taken to reduce or eliminate long-term risk to human life and property from hazards. Hazard mitigation planning is the process through which hazards that threaten communities are identified; likely impacts are determined, prioritized and implemented. This revised plan continues the natural hazard mitigation planning process for Kings County (including school districts and the Tachi Yokut Tribe) and participating cities including Avenal, Corcoran, Hanford, and Lemoore, identifies natural hazards and risks within Kings County and identifies the hazard mitigation strategy to reduce vulnerability and make the communities of Kings County more disaster resistant and sustainable. Information in this plan can be used to help guide and coordinate mitigation activities and local land use decisions.

Kings County and participating jurisdictions initially developed this hazard mitigation plan to reduce future losses to the county and its communities resulting from natural hazards. The revised plan also was prepared to meet the evolving requirements of the Disaster Mitigation Act of 2000 and subsequently changes to the guidance and revised crosswalks. The revised plan seeks to maintain eligibility for the FEMA Pre-Disaster Mitigation (PDM) and Hazard Mitigation Grant Programs (HMGP).

The Kings County Local Hazard Mitigation Plan continues to be a multi-jurisdictional plan that covers the following local governments who participated in the planning process:

- Kings County
- City of Avenal
- City of Corcoran
- City of Hanford
- City of Lemoore
- Santa Rosa Rancheria/Tachi Yokut Tribe
- Kings County Office of Education Representing the School Districts of:
    - Armona Union Elementary School District
    - Central Union School District
    - Corcoran Unified School District
    - Hanford Elementary School District
    - Hanford Joint Union High School District
    - Island Union Elementary School District
    - Kings County Office of Education District
    - Kings River-Hardwick School District
    - Kit Carson Elementary School District
    - Lakeside Union Elementary School District
    - Lemoore Union Elementary School District

- Lemoore Union High School District
- Pioneer Union Elementary School District
- Reef-Sunset Unified School District

The planning process followed and continues the methodology prescribed by FEMA, which began with the formation of a Local Hazard Mitigation Planning Team comprised of key stakeholders from Kings County, participating jurisdictions, and state and federal agencies. The Planning Team conducted a revised risk assessment 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 risk assessment indicated that earthquakes, floods, droughts, and extreme heat are the hazards most likely to significantly affect people and property in the county. Planning Team members are listed on the Acknowledgements page.

County Overview

History

When the first white settlers arrived in Kings County, the indigenous population consisted of the Tachi tribe of the Yokut Indians. The Yokuts controlled the entire San Joaquin Valley from the delta to Tejon Pass. The first white settlement was a ferry situated on the south bank of the Kings River where the Overland stage route crossed. Known as Kingston, this town was part of Tulare County until a bridge replaced the ferry in 1873, and the town went into decline and was abandoned.

A few small settlements followed the initial settlement at Kingston, but the first incorporated community was Lemoore, first surveyed in 1872. The Southern Pacific railroad arrived in the town in 1877, and the second permanent community began along the railroad tracks shortly after its arrival. Named for James Madison Hanford, the paymaster of the Southern Pacific, the second town was incorporated in 1891. Hanford became the county seat two years later, when Kings County was formed from the western half of Tulare County.

The early economy of the county centered on ranching and farming. The first vineyard was established in 1890 and the first dairy came three years later. Settlement in Kings County remained modest throughout much of the county's first century. The third incorporated community, Corcoran, was established along the San Francisco and San Joaquin Railroad in 1905. In 1929, the fourth incorporated town, Avenal, was established on the west side of the county following the discovery of oil in the hills.

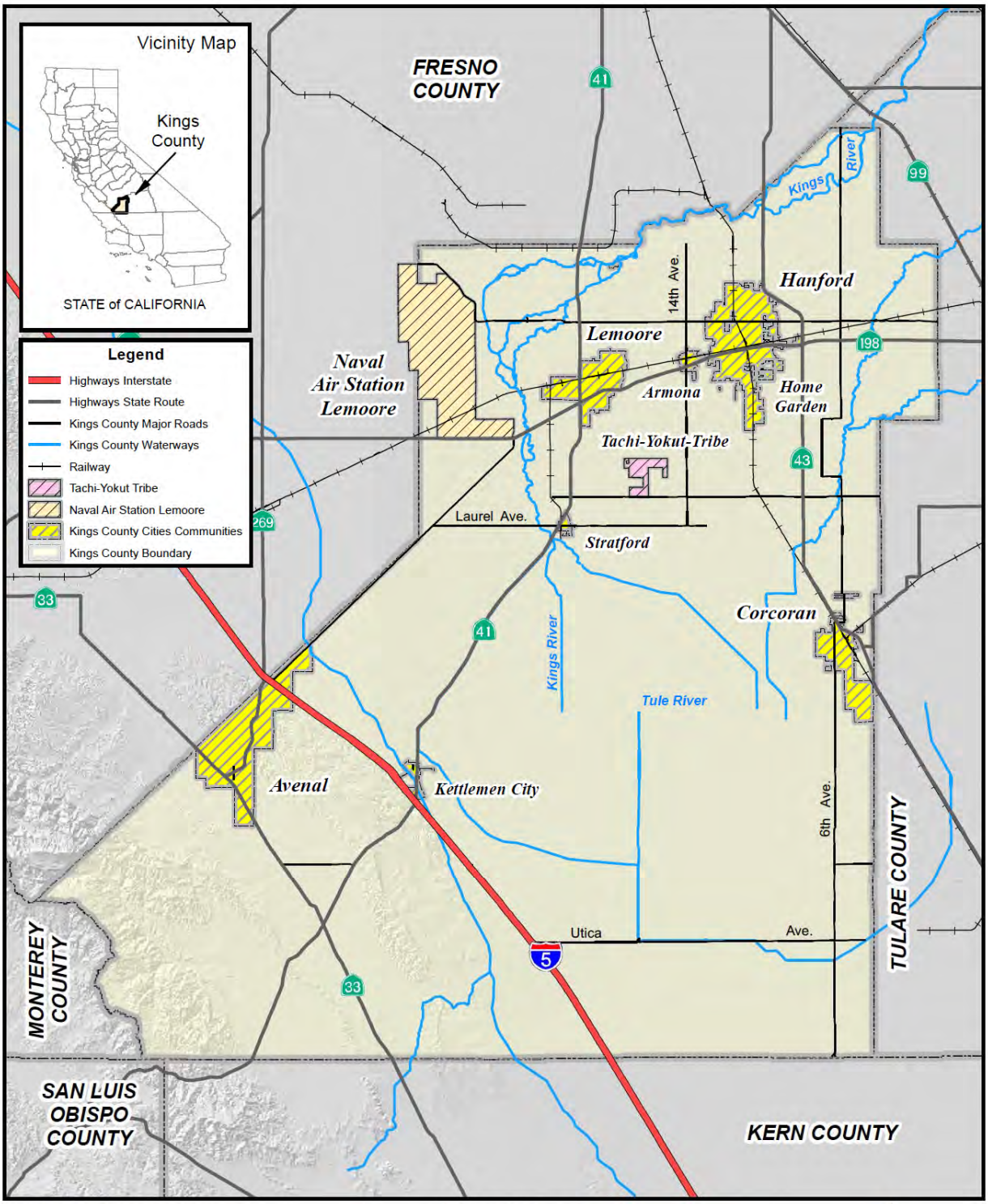
Kings County encompasses approximately 1,435 square miles. It is located slightly south of the geographic center of California and occupies part of the San Joaquin Valley and a portion of the eastern slope of the California Coast Ranges. The county is bounded on the southwest by the Coast Ranges, on the north and west by Fresno County, to the east by Tulare County, and to the south by Kern County.

There are four incorporated cities in the county—Avenal, Corcoran, Hanford, and Lemoore—and four community service areas—Armona, Home Garden, Kettleman City, and Stratford. Kings County is also home to the Lemoore Naval Air Base, two state prisons, and the Tachi Yokut tribe, who live on 170 acres of tribal land at the Santa Rosa Rancheria. The

Board of Supervisors is the governing body for Kings County and many county special districts.

Topography in most of the county is relatively flat. However, elevation ranges from a low of 175 feet above mean sea level in the Tulare Lake bed, to 3,500 feet above mean sea level in the southwest, near the Kettleman Hills and the Kreyenhagen Hills. The county is located in the Tulare Lake hydrologic region that 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 climate in Kings County can be classified as Mediterranean with average rainfall rates of 7.6 inches annually, occurring primarily between November and April. A map of Kings County is located on the following page.

Kings County Planning Area Map



HOWELL CONSULTING

Print Date : October 30, 2012
Data Souces: Kings County, Cal EMA

Kings County
Multi-Hazard Mitigation Plan
County Planning Area

Population
The total estimated county population in 2010 was 152,982 up from 147,729 people in 2007. Population estimates for the unincorporated areas from the 2010 U.S. Census are included in the table below.

Unincorporated Kings County Population

Census-designated place	Total Population	White	African American	Native American	Asian	Pacific Islander	Other races	Two or more races	Hispanic or Latino (of any race)
Armona	4,156	2,058	99	64	85	13	1,597	240	2,784
Grangeville	469	393	15	5	5	0	41	10	145
Hardwick	138	63	5	0	0	0	67	3	86
Home Garden	1,761	652	221	63	50	8	677	90	1,189
Kettleman City	1,439	478	4	8	1	0	887	61	1,383
Lemoore Station	7,438	4,883	729	70	560	53	418	725	1,445
Stratford	1,277	574	16	17	19	1	617	33	1,069
All others not CDPs (combined)	17,488	11,304	377	755	267	18	3,991	776	7,851

Source: 2010 U.S. Census

Economy
Kings County is located in the heart of California's rapidly growing San Joaquin Valley, the richest agricultural area in the world. With that distinction also come the challenges of an economy, which has historically been dependent on seasonal agriculture and low wages. Government is the largest employer, followed by agriculture, trade, transportation & utilities, education & health care, and manufacturing.

It appears 2011 is the start of a rebuilding period for Kings County cities and unincorporated communities. Though property values remain low, there are some encouraging signs in the housing sector. On the brighter side, the Central San Joaquin Valley is currently experiencing growth in food processing, warehousing and distribution, education, and health care. Though population growth is temporarily stable, the Valley is seeing a trend of nonfarm job growth as businesses consider a location in the 'Affordable California' (Kings County Economic Development Commission).

More detailed information on the general overview of the county and participating jurisdictions are located in the jurisdictional annexes attached to this plan.

Plan Organization and Structure
The Plan has been developed using a structure similar to, but modified from its previous format. The Plan is divided into several primary sections, each covering a component of the document as required under state and federal planning guidance. The primary sections are further supported by front documents, sectional attachments, and appendices that support specific issues attached to the plan.

- **Introduction**
- **Element A: Planning Process**
- **Element B: Hazard Identification & Risk Assessment**
- **Element C: Mitigation Strategy**
- **Element D: Plan Review, Evaluation and Implementation**
- **Element E: Plan Adoption**
- **References**
- **Planning Process Documentation**
- **Community Profile Annexes**
    - **Unincorporated Kings County**
    - **Kings County School Districts**
    - **Santa Rosa Rancheria/Tachi Yokut Tribe**
    - **City of Avenal**
    - **City of Corcoran**
    - **City of Hanford**
    - **City of Lemoore**

Element A: Planning Process

Requirement §201.6(b): An open public involvement process is essential to the development of an effective plan.

More often than not, communities are faced with having to deal with the aftermath of an unwanted hazard that can devastate areas of a community. While we cannot prevent disasters from happening, their effects can be reduced or eliminated through hazard mitigation planning, but only if a local government has the foresight to assess likely hazards and craft preventative measures before the next hazard event occurs. This Chapter describes the background of the hazard mitigation planning process in Kings County.

The Kings County Office of Emergency Management (OEM) recognized the need and importance of revising this plan and was responsible for its initiation and for securing funding through a FEMA Homeland Security Grant. The county contracted with Howell Consulting in early 2012 to facilitate the revision and update to their existing 2007 LHMP. Howell Consulting's role was to assist Kings County in the following:

- Form a local hazard mitigation Planning Team and include key stakeholders and representatives
- Follow FEMAs planning guidance and follow the requirements set forth in the DMA 2000
- Facilitate the planning process and identify the data requirements
- Facilitate the process for public involvement and input
- Work closely with the California Emergency Management Agency (Cal EMA) on the development and review of the revised plan and planning process
- Ensure coordination with Cal EMA and FEMA Region on review, approval and formal adoption of the plan by the Kings County Board of Supervisors/City Councils

Kings County utilized many of FEMA's multi-hazard mitigation planning guidance documents including the *Planning How-To Guides* to structure the overall facilitation and development of the planning process. The following sections describe the planning process.

Multi-Jurisdictional Participation
Each jurisdiction participating in this plan developed and revised its own annex, which provides a revised and more detailed assessment of each jurisdiction's unique risks, as well as their mitigation strategy to reduce long-term losses. Each jurisdictional annex continues to address the following items:

- Community profile summarizing geography, history, economy, and population
- Hazard information on geographically specific hazards
- Hazard map(s) at an appropriate scale for the jurisdiction, if available
- Number and value of buildings, critical facilities, and other community assets located in hazard areas, if available
- Vulnerability in terms of future growth and development in identified hazard areas

- Capability assessment describing existing regulatory, administrative, technical, and fiscal resources and tools, as well as outreach efforts and partnerships, and past mitigation projects
- Mitigation actions specific to the jurisdiction

Each jurisdiction was required to meet strict plan participation requirements defined at the beginning of the process, which included the following:

- Designating a representative to serve on the Kings County Hazard Mitigation Planning Team
- Participating in most, if not all of the Planning Team meetings
- Providing data and information to complete the jurisdictional annex, including identifying at least one mitigation action and completing the *Information Collection Tool*
- Reviewing and commenting on plan drafts
- Informing the public, local officials, and other interested parties about the planning process and providing opportunity for them to comment on the plan and annex within their own jurisdiction
- Formally adopting the mitigation plan and the jurisdictional annex

All of the jurisdictions with annexes to this plan met all of these participation requirements. In most cases, the representative for each jurisdiction brought together a Planning Team to help collect data, identify mitigation actions and implementation strategies, and review annex drafts.

Element A.1. Planning Process

Requirement §201.6(c)(1): [The plan shall document] the planning process used to develop the plan, including how it was prepared, who was involved in the process, and how the public was involved.

The Kings County Operational Area is an active county where emergency management issues are discussed, presented and recommended for approval by the Kings County Board of Supervisors as well as the Cities of Avenal, Corcoran, Hanford and Lemoore City Councils. The Kings County OEM staff distributed a formal invitation to key stakeholders, county, city, special districts, state and federal representatives to participate in the planning process by attending the official planning team/project kickoff meeting. The following describes the planning process.

Hazard Mitigation Planning Team Tasks
Specific tasks were identified for the Planning Team in order to ensure that project goals for the plan revision were undertaken and completed. The following represents those primary Planning Team tasks:

- Coordinate tasks and activities with the Office of Emergency Management to develop all-hazards disaster mitigation plan and oversee the planning process.
- Prioritize hazards vs. resources.

- Select highest and best mitigation recommendations and develop those recommendations for further action by the Kings Operational Area and the participating jurisdictions of Avenal, Corcoran, Hanford and Lemoore and together with their own agencies (local participating jurisdictions)

- Review planning drafts, recommendations and updates

- Develop and implement long and short term goals

- Integrate the plan with all phases of comprehensive emergency management planning

- Provide for the implementation of Planning Team decisions

- Encourage, coordinate and provide a methodology for the implementation of public input

- Establish Hazard Mitigation Planning Team tasks locally (Kings County and Cities of Avenal, Corcoran, Hanford and Lemoore) to include but not be limited to the following:

    - Determine implementation ability and constraints for proposed hazard mitigation planning steps and development of strategies
    - Bring forward community concerns through private and public input
    - Identify implementation resources
    - Provide for the update of comprehensive Emergency Management Plans on a scheduled basis
    - Evaluate and carry out mitigation activities
    - Assist in implementation of funding identification and procurement

- Ensure that adjacent jurisdictions, pertinent private entities and citizens are informed of the hazard mitigation planning process and offer each the opportunity for input into the plan.

A Planning Team was developed that included members from all participating jurisdictions. The Planning Team representatives decided to work collectively on the plan and the jurisdictional annexes. Planning Team members were responsible for bringing specific information and data to and from the Planning Team, from their respective jurisdictions and agencies seeking approval, such as Kings County, the Cities of Avenal, Corcoran, Hanford and Lemoore. Within each jurisdiction, staff met with the Planning Team representative to develop and update their specific annex. The titles of the staff for each jurisdiction and their meeting frequency is as follows:

City of Avenal

- Police Chief/Emergency Manager – Official Planning Team Representative
- City Manager
- Community Development Department Director (Floodplain Manager)
- Public Works Department Director (Building Official)

The City of Avenal Planning Team met collectively at their regularly scheduled Department Head meetings which were held each week. This meeting included a roundtable discussion which is where the Hazard Mitigation Plan update was discussed by the Avenal Police Chief. Discussions included the overall project scope and planning process participation, hazard identification and analysis, vulnerability assessment, development trends, continued public involvement, mitigation goals and strategy development, mitigation projects and actions updates/revisions and new project development, and draft plan review and approval processes.

City of Corcoran

- Deputy Police Chief – Official Planning Team Representative
- Police Chief/Emergency Manager
- City Manager (Floodplain Administrator)
- Community Development Department Director
- Public Works Department Director
- Finance Department Director
- Human Resources Department Director

The City of Corcoran Planning Team met collectively at their regularly scheduled Department Head meetings held every Tuesday. This meeting included a roundtable discussion where the Hazard Mitigation Plan update was discussed by the Emergency Manager. In Corcoran, the Deputy Police Chief was assigned to the Official Planning Team and was invited to attend the Department Head meetings when requested by the Police Chief to brief the City Management team after each Official Planning Team meeting. Discussions included the overall project scope and planning process participation, hazard identification and analysis, vulnerability assessment, development trends, continued public involvement, mitigation goals and strategy development, mitigation projects and actions updates/revisions and new project development, and draft plan review and approval processes.

City of Hanford

- Fire Chief/Emergency Manager – Official Planning Team Representative
- City Manager
- Community Development Department Director (Floodplain Manager)
- Public Works Department Director

The City of Hanford Planning Team met collectively at their regularly scheduled Department Head meetings which were held each week. This meeting included a roundtable discussion, which is where the Hazard Mitigation Plan update was discussed by the Fire Chief. Discussions included the overall project scope and planning process participation, hazard identification and analysis, vulnerability assessment, development trends, continued public involvement, mitigation goals and strategy development, mitigation projects and actions updates/revisions and new project development, and draft plan review and approval processes.

City of Lemoore

- City Manager
- Police Chief/Emergency Manager

- Planning Department Director (Floodplain Administrator)
- Public Works Department Director (Building Official)

The City of Lemoore Planning Team met collectively at their regularly scheduled Department Head meetings, which were held each week. This meeting included a roundtable discussion, which is where the Hazard Mitigation Plan update was discussed by the Fire Chief. In Lemoore, a Police Department Sargent was assigned to the Official Planning Team. This representative briefed the Police Chief after each Planning Team meeting, who in turn coordinated the planning process at the Department Head level for the City. Discussions included the overall project scope and planning process participation, hazard identification and analysis, vulnerability assessment, development trends, continued public involvement, mitigation goals and strategy development, mitigation projects and actions updates/revisions and new project development, and draft plan review and approval processes.

The Cities of Avenal, Corcoran, Hanford and Lemoore jurisdictional annexes were developed and discussed in coordination with the Official Planning Team meeting schedule as noted in the table on **Page 19** either at their regularly scheduled Department Head meetings or immediately following those meetings. Also, the lead Planning Team member for each jurisdiction contacted key departments directly for additional information. In addition, this hazard mitigation planning process fit in well with the ongoing updating of the some of the participating jurisdictions safety elements of their general plans.

Planning Meetings and Process

The planning process officially began with a project introduction meeting in Hanford, California, on March 22, 2012. The overall schedule for the project was discussed, highlighting major project milestones and ending with the anticipated final revised draft plan submitted to FEMA for approval in December 2012. The Howell Consulting Team gave a presentation to all attendees on Hazard Mitigation Planning and the planning process. Members of the public were also solicited to serve on the Planning Team and since many of the governmental representatives on the Planning Team also resided within Kings County those members served a dual role.

At the second meeting of the Planning Team also in Hanford, on July 12, 2012, the consultants provided information updates, survey results to date, public meeting results, asked for updates in data needed from the jurisdictions and provided an overview of the 2007 Mitigation Strategies. The focus of this meeting however, was the Hazard Identification and Risk Assessment process. The risk assessment process identifies and profiles relevant hazards and assesses the exposure to lives, property and infrastructure to these hazards. The goal of the risk assessment is to estimate the potential losses in Kings County along with the participating jurisdictions from a hazard event. Planning Team members at this meeting evaluated the hazards in the 2007 plan and profiled which hazards occurred over the 5-year planning cycle. Element B covers this topic in detail.

The third Planning Team meeting was held on September 27, 2012 at the Fire Administration HQ in Hanford. The planning team meeting participants were lead through a series of discussions on current capabilities and mitigation actions and strategies. The most important output of this meeting was the collaboration of the progress the jurisdictions had made on existing hazard mitigation projects, despite receiving limited federal and state support, many of the initial 2007 projects have been completed by Kings

County jurisdictions. The Planning Team thoroughly reviewed the existing Mitigation Strategies, developed new strategies to meet the goals and objectives and prioritized those strategies for the operational area. The Planning Team members took the newly developed strategies back to their jurisdictions to gain input and feedback.

On October 24th and 25th, 2012 the consulting team met individually with the cities of Avenal, Corcoran, Hanford and Lemoore to discuss their mitigation strategies and actions. The purpose of these workshops with the local representatives was to refine the proposed 2012 actions and discuss the status of the 2007 mitigation actions and programs with the City Departmental representatives. This meeting was in additional to the normal Planning Team meetings and at the request of the City's Official Planning Team member to provide additional information on what was needed for the mitigation strategies both past and future.

In November 2012, the draft plan was reviewed by the Kings County Fire Chief (designated Director of Emergency Services), the Emergency Services Coordinator, the Planning Team and several other key county staff, such as the Community Development Agency key personnel. In addition, each participating jurisdiction participated in a detailed review of the draft plan.

In December 2012, Howell Consulting held a conference call due to the holiday schedule with participating Planning Team Members. The purpose of this meeting was to brief on the final draft plan and release it for comments to include the public. The plan was placed on the county website for public review and comment, placed at strategic locations around the county including, the Fire Department Administration and at each of the participating jurisdictional City Manager's Offices as part of the planning process. Additionally, fliers were posted on community bulletin boards in the less populated areas within each jurisdiction.

The following table shows a summary of the planning process meetings, their topics, dates, and locations.

Meeting Number	Title	Date	Location
1	Kick-off/Planning Team roles and expectations	03/22/12	Hanford
2	Hazard Identification/Analysis, general update	07/12/12	Hanford
3	Mitigation Strategy	09/27/12	Hanford
4	Jurisdictional Site Visits, Mitigation Strategy, general update	10/24-25/12	Avenal, Corcoran, Hanford, Lemoore
5	Final Draft Briefing	12/2012	Hanford - Conference Call

Additionally, the Planning Team communicated during the planning process with a combination of in-person meetings, conference calls, email correspondence and communication through an online documents/data-sharing site. The meeting topics along with sign-in sheets and agendas are located in the Planning Process Documentation section of this plan.

The official Planning Team is as follows:

Name	Title	Department	Jurisdiction
LHMP Planning Team Members			
Jack Amoroso	Police Chief	Avenal Police Department	City of Avenal
Gary Cramer	Deputy Chief	Corcoran Police Department	City of Corcoran
Tim Ironimo	Fire Chief	Hanford Fire Department	City of Hanford
Pat Mundy	Sgt.	Lemoore Police Department	City of Lemoore
Michelle Speer	Emergency Services Coordinator	Kings County Office of Emergency Management	Kings County
Courtney Espinoza	Emergency Services Coordinator	Kings County Office of Emergency Management	Kings County
Trudy Maletta	Emergency Services Manager	Kings County Office of Emergency Management	Kings County
Joe Neves	County Supervisor	County of Kings Board of Supervisors	Kings County
William Lynch	Fire Chief	Kings County Fire Department	Kings County
Mike Virden	Fire Marshal	Kings County Fire Department	Kings County
Greg Gatzka	Director	Kings County Community Development Agency	Kings County
Chuck Kinney	Manager	Kings County Community Development Agency	Kings County
Jeremy Kinney	Manager	Kings County Community Development Agency	Kings County
Tim Niswander	Agricultural Commissioner	Kings County Department of Agriculture	Kings County
Alex Torres	Public Safety Manager	Santa Rosa Rancheria Division of Public Safety	Santa Rosa Rancheria
Angie Sorrento	Administrator	Kings County Office	Kings County

Name	Title	Department	Jurisdiction
		of Education	
Howell Consulting Team			
Brenna Howell	Project Manager	Howell Consulting	Howell Consulting
Neal T. O'Haire	Lead Project Planner/Facilitator	Howell Consulting	Howell Consulting
Jim Kniss	GIS Mapping Coordinator	Howell Consulting	Howell Consulting

Element A.2. Coordination with other Communities

Requirement §201.6(b)(2): An opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia and other private and non-profit interests to be involved in the planning process.

Since the inception of this planning process a major forum for sharing this planning with adjacent jurisdictions is the Mutual Aid Regional Advisory Committee for California Mutual Aid Region V. Region V's members are contiguous counties to Kings County. The value to this collaboration is that these counties share many of the same characteristics as Kings County such as similar threats, politics, geography and culture. This coordinated process has been made possible by the support of many federal grant programs. Since many of the counties in Region V have already gone through the hazard mitigation planning process, their experience and advice has proven invaluable to Kings County. Each of these meetings includes a local roundtable discussion where Kings County has been able to freely and collaboratively share their local hazard mitigation planning process.

In addition, the Planning Team developed a list of neighboring communities, local and regional agencies involved in hazard mitigation activities, as well as other interests, to invite by letter to review and comment on the draft of the Kings County Local Hazard Mitigation Plan. A copy of this letter is provided in the Planning Process Documentation section of this plan, entitled "Interested Parties". The comments resulting from this effort were incorporated into the plan, as appropriate. The stakeholders invited to comment on the plan were the following:

- Kings County LHMP Planning Team
- Kings County Board of Supervisors
- Avenal City Council
- Corcoran City Council
- Hanford City Council
- Lemoore City Council
- Heads of County Departments
- Heads of City Departments
- Kings County Community Action Organization
- Kings County Commission on Aging

- Kings County Water District
- Kings River Conservation District
- Westlands Water District
- Tachi Yokut Tribe - Casino
- Tachi Yokut Tribe – Santa Rosa Rancheria
- Kern County Office of Emergency Services
- Tulare County Office of Emergency Services
- Fresno County Office of Emergency Services
- California Emergency Management Agency (Fresno Office)
- Corcoran State Prisons
- Avenal State Prison
- Lemoore Naval Air Station
- U.S. Bureau of Reclamation (Fresno office)
- National Weather Service – Hanford Station
- American Red Cross

As part of the coordination with other agencies, the Planning Team collected and reviewed existing technical data, reports and plans. Kings County and the cities located there use a variety of comprehensive planning mechanisms, such as land use and general plans, emergency operations plans, and municipal ordinances and building codes, to manage community growth and development. This information was used in the development of the hazard identification, vulnerability assessment, and capability assessment and in the formation of goals, objectives, and mitigation actions. These sources are documented throughout the plan and specifically in the capability assessment sections of each jurisdictional annex.

Element A.3. Public Involvement

Requirement §201.6(b)(1): An opportunity for the public to comment on the plan during the drafting stage and prior to plan approval; Requirement §201.6(c)(1) [The plan shall document] the planning process used to develop the plan, including how it was prepared, who was involved in the process, and how the public was involved.

At the beginning of the planning project it was decided by Kings County OEM that early public outreach in all stages of the plan development would be a high priority. Copies of those advertisements are located in the Planning Process Documentation section of this plan. In addition to the solicitation for Planning Team support, there was a Public Survey that was developed and distributed through various means such as posted on the Kings County website, posted on local message boards and handed out to various members of the public at events in within Kings County and the participating jurisdictions. The survey provided an opportunity for the public to share their opinions and participate in the mitigation planning process. The information provided aided in helping the Planning Team better understand the hazard concerns and identified area policies and projects that could potentially help lessen the impact of future hazard events in Kings County. The survey along

with the survey results, are located in the Planning Process Documentation section of this plan.

There were also three separate public workshops held by the consulting team in coordination with the county/cities. These workshops were held in the evenings, during the week at selected, accessible locations within Kings County, so that the public could easily attend. The overall purpose of these meetings were to inform the public on the purpose and planning process for the local hazard mitigation plan development, present the types of hazards in or possibly affecting Kings County, and seek input from the public on priorities for risk reduction.

Corcoran advertised their meeting in the *Corcoran Journal*. Avenal advertised their meeting in their local newspaper and Kings County advertised all of the meetings by flyers placed in each unincorporated area of the county (Armona, Kettleman City, Home Garden, and Stratford) at fire stations, libraries, and/or posted in grocery stores and other places frequented by local residents and the county website, which most of the City websites link. Meeting dates are provided below.

- **Monday May 14, 2012 - City of Hanford/Lemoore and Kings County Unincorporated Areas**
- **Tuesday May 15, 2012 - City of Corcoran and Kings County Unincorporated Areas**
- **Wednesday May 16, 2012 - City of Avenal and Kings County Unincorporated Areas**

Once the first draft of the revised multi-jurisdictional plan and annexes had been developed, Kings County made it available on their website at www.countyofkings.com. A hard copy was also available at the following locations: Kings County Fire Administration (Hanford), the local libraries, and the City Manager's Offices for the participating cities. The jurisdictions announced the availability of the draft plan and the public comment. A copy of the notice is provided in Planning Process Documentation section of this plan.

A record of the public input, surveys and remaining planning process documentation are on file with Kings County OEM. There were no public comments from the workshops or the final review from the public.

The overall process included the discussion of the hazard mitigation planning process into various public meetings such as Board or Supervisors meetings, Emergency Management meetings, Local and Regional Public Health meetings, Fire Chief's meetings, School Board meetings and participating jurisdictional meetings and forums.

The agendas, presentations and attendance rosters for each of these public meetings are located in the Planning Process Documentation section attached to this plan.

Element A.4. Review and Incorporation of Exiting Plans

Requirement §201.6(b)(3): Review and incorporation, if appropriate, of existing plans, studies, reports, and technical information.

Based on the capability assessment described throughout this plan, communities in Kings County continue to plan and implement programs to reduce losses to life and property from natural hazards. This plan builds upon the momentum developed through previous and related planning and mitigation efforts and recommends implementing projects through the following plans, where possible:

- General Plans and zoning codes of participating jurisdictions
- Kings County Emergency Operations Plan
- Capital Improvements Plans in the county
- Other community plans within the county, such as water master plans, storm water management plans, and parks and recreation plans
- The Fresno-Kings Unit Pre-Fire Management Plan and any Local Fire Safe Plans and Community Wildfire Protection Plans that may be developed in the future
- Other plans and policies outlined in the capability assessment section of this plan

The General Plan for Kings County has been updated. The mitigation plan will be a primary source used to update the 2010 Safety Element of the General Plan. The Safety Element is updated on a five-year cycle consistent with the mitigation plan to improve efficient use of county resources and to improve consistency within county plans and policies.

Element A.5. Plan Maintenance Process

Requirement §201.6(c)(4)(iii): [The plan maintenance process shall include a] discussion on how the community will continue public participation in the plan maintenance process.

Kings County is dedicated to involving the public directly in review and updates of the Kings County Local Hazard Mitigation Plan. Copies of the plan will be catalogued and kept at all appropriate agencies in the County as well as at the main library and posted on official websites.

Public meetings will be held as part of each annual review and the required five-year update of the plan. The meetings will provide a forum for public input to the plan. In addition to public meetings, the OEM office will provide an update to the Board of Supervisors on the process of mitigation planning in Kings County. This will allow the public to comment and capture any relevant comments into the public record.

Element A.6. Continued Public Involvement

Requirement §201.6(c)(4)(i): [The plan maintenance process shall include a] section describing the method and schedule of monitoring, evaluating, and updating the mitigation plan within a five year cycle.

The Kings County Operational Area Local Hazard Mitigation Planning Team has made the commitment to annually bring this plan before the public through public meetings and community posting so that citizens may make input as strategies and implementation actions change. Each jurisdiction is responsible for assuring that their citizenry are informed when deemed appropriate by the standing Planning Team. This plan will also be on the standing agenda of the Kings County Operational Area meeting. This meeting occurs at least twice annually in January and June and is led by the Operational Area Coordinator.

The Kings County Fire Department, Office of Emergency Management, Coordinator will be responsible for the monitoring, evaluating, and updating of the plan for the Operational Area. The following are the designated positions in the participating jurisdictions that will also take lead in ensuring the plan is continually monitored, evaluated and updated.

Name	Title	Department	Jurisdiction	Monitoring	Evaluating	Updating
Jack Amoroso	Police Chief	Avenal Police Department	City of Avenal	X	X	X
Gary Crammer	Deputy Chief	Corcoran Police Department	City of Corcoran	X	X	X
Tim Ironimo	Fire Chief	Hanford Fire Department	City of Hanford	X	X	X
Pat Mundy	Sgt.	Lemoore Police Department	City of Lemoore	X	X	X
Michelle Speer	Emergency Services Coordinator	Kings County Office of Emergency Management	Kings County	X	X	X

Element B: Hazard Identification and Risk Assessment

Requirement §201.6(c)(2)(i): [The risk assessment shall include a] description of the type, location and extent of all natural hazards that can affect the jurisdiction. The plan shall include information on previous occurrences of hazard events and on the probability of future hazard events.

§201.6(c)(2)(ii): [The risk assessment shall include a] description of the jurisdiction's vulnerability to the hazards described in paragraph (c)(2)(i) of this section. This description shall include an overall summary of each hazard and its impact on the community. All plans approved after October 1, 2008 must also address NFIP insured structures that have been repetitively damaged by floods. The plan should describe vulnerability in terms of:

§201.6(c)(2)(ii)(A): The types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard areas;

§201.6(c)(2)(ii)(B): An estimate of the potential dollar losses to vulnerable structures identified in ... this section and a description of the methodology used to prepare the estimate.

§201.6(c)(2)(ii)(C): Providing a general description of land uses and development trends within the community so that mitigation options can be considered in future land use decisions.

Risk to natural hazards is a combination of hazard, vulnerability and capability. This section of the LHMP will look at both hazards and vulnerability. The risk assessment process identifies and profiles relevant hazards and assesses the exposure to lives, property and infrastructure to these hazards. The goal of the risk assessment is to estimate the potential losses in Kings County from a hazard event. This process also allows communities in Kings County to better understand their potential risk to natural hazards and provides a framework for developing and prioritizing mitigation actions to reduce the risks from future hazard events in Kings County.

In the early meetings with Kings County and the Planning Team, data was reviewed from the following sources on hazards affecting the county, those sources were: the Federal and State Disaster Declaration History, the State of California Hazard Mitigation Plan (2010), the Health Safety Element of the Kings County 2035 General Plan (2010), and interviews of staff that live and work in Kings County.

The Planning Team, during their July 2012 meeting, came to agreement on significant hazards to Kings County. The Planning Team agreed not to address technological or human-caused hazards, which are addressed in emergency operations plans for the county/cities. The hazards contained in this planning effort are in alphabetical order and listed below.

- Dam Failure
- Drought
- Earthquake
- Extreme Heat
- Flood
- Fog
- Freeze

- Landslide
- Tornado
- Wildfire

Non-Profiled Hazards
The Planning Team reviewed data and discussed several other hazards, which were eliminated from further discussion because they occur rarely and/or their impacts are not significant. The list below details these hazards and provides a brief explanation for their omission from further profiling.

- Avalanche - Snowfall is extremely rare to nonexistent across the planning area.
- Coastal Erosion/Storm - Hazard does not occur due to distance from coasts and ocean.
- Hailstorm - Severe thunderstorms during which hail normally occurs are rare.
- Hurricane - Hazard does not occur due to distance from ocean.
- Land Subsidence - Land subsidence does occur in many areas but primarily affects water wells, which local agencies address.
- Tsunami - Hazard does not occur due to distance from ocean.
- Severe Winter Storm - Very little to no snowfall recorded throughout county; temperatures fall below 32 degrees Fahrenheit only a few days of the year.
- Windstorm - High winds occur but are not common.
- Volcano - The U.S. Geological Survey does not include Kings County in their map of areas identified as subject to hazards from potential eruptions in California.

The remainder of this section begins with an overview of the history of declared disasters in Kings County followed by the profiles of identified hazards.

Disaster Declaration History

One method to identify hazards is to look at the events that have triggered federal and/or state disaster declaration that included Kings County. The following table lists the disaster declarations where Kings County was designated federal and/or state disaster declarations from 1950 to the present.

Kings County Disaster Declaration History 1950-present

Hazard Type	Disaster Name	Disaster Number	State Declaration	Federal Declaration
Flood	1969 Storms	OEP DR-253	01/29/69	01/26/69
Flood	Heavy Snow Runoff	OEP DR-2270	01/28/69	08/15/69
Severe Storm, Freeze	Freeze/ Severe Weather		04/17/72	not declared
Drought	1976 Drought		02/13/76	not declared
Severe Storms	Winter '78 Storms	DR-547	02/27/78	02/15/78

Hazard Type	Disaster Name	Disaster Number	State Declaration	Federal Declaration
Flood	Winter Storms	DR-682	03/03/83	02/09/83
Severe Storm	Severe Winter Storms	DR-1044	01/17/95	01/13/95
Severe Storm, Flood	Late Winter Storms	DR-1046		01/10/95
Flood	January 1997 Floods		01/31/97	
Flood	El Nino		02/02/98	not declared
Freeze	Freeze	DR-1267	02/09/99	02/09/99
Freeze	Severe Freeze	DR-1689	3/13/2007	3/13/07
Severe Storm	08 January Storms	OES 2008-01	1/2008	not declared
Drought	Central Valley Drought	OES 2008-03	06/12/08	
Flood	December 2010 Statewide Storms	DR-1952 OES 2010-17	12/21/10	01/26/11

Source: Kings OEM, Cal EMA and FEMA

The majority of declarations and all but two federal disaster declarations were declared for severe storms and flooding. These occurred twice in 1969, once each in 1978 and 1983, and twice in 1995 and again in 2010-2011. A federal disaster declaration for freeze in February was declared in 1999 and in 2007. The remaining declaration was a state declaration for drought in 1976 and 2008.

The federal government may also issue a disaster declaration through the U.S. Department of Agriculture (USDA) and/or the Small Business Administration, as well as through FEMA. The quantity and types of damage are the determining factors. A USDA declaration makes all qualified farm operators in the designated areas eligible for low-interest emergency loans from the USDA's Farm Service Agency. As part of an agreement with the USDA, the Small Business Administration offers low interest loans for eligible businesses that suffered economic losses in declared and contiguous counties. The USDA declarations are located in the following table since the last plan update in 2007.

USDA Agricultural Declarations Since 2007 Plan Update

USDA Declaration	Date of Occurrence
Drought; Primary County	3/1/2008 and continuing
Extreme High Temperatures; Primary County	6/17-22/2008
Drought; Contiguous County	1/1/2009 and continuing
Freeze, followed by Excessive Heat; Primary County	4/4-22/2009
Freeze; Contiguous County	4/8-9/2011
Hail, Rain, Cold Temperatures; Primary County	4/11-13/2012
Drought	1/1/2012 and continuing

Methodology

The hazards identified in Kings County by the Planning Team are profiled in this section. Hazard profiles provide information on the hazard description, extent and magnitude, previous occurrences, and probability of future occurrence. The sources used to collect this information for Kings County included the following:

- Disaster declaration history from the California Emergency Management Agency (Cal EMA) and FEMA.
- California State Multi-Hazard Mitigation Plan (2010).
- Kings County Emergency Operations Plan (2008) and the Safety Element of the Kings County General Plan (2010).
- Geographic information systems (GIS) data from Cal EMA and other state agencies, the U.S. Geological Survey, and the Kings County Planning Department.
- Information collection from the Planning Team meetings and completed by each participating jurisdiction profiling hazards in their area.

A detailed profile for each of the identified hazards compiles information on the following characteristics of the hazard:

Geographic Extent and Potential Magnitude

This section describes the potential severity of disaster and any secondary events caused by the hazard and the extent or location of the hazard in the planning area. Magnitude is classified by the following:

Catastrophic: More than 50 percent of the planning area affected

Critical:	Between 35-50 percent of the planning area affected
Limited:	10-25 percent of the planning area affected
Negligible:	Less than 10 percent of the planning area affected

Previous Occurrences
This section includes information on historic incidents, including impacts, if known. An Information Collection Tool was used to capture information from participating jurisdictions on past occurrences. Information from the Planning Team was combined with other data sources such as the National Weather Service.

Probability of Future Occurrences
The frequency of past events is used to gauge the likelihood of future occurrences. Based on historical data, the probability of future occurrences is categorized into one of the following classifications:

Highly Likely:	Near 100 percent chance of occurrence next year or happens every year
Likely:	Between 10 percent and 100 percent chance of occurrence in next year or has a recurrence interval of 10 years or less
Occasional:	Between 1 percent and 10 percent chance of occurrence in the next year or has a recurrence interval of 11 to 100 years
Unlikely:	Less than 1 percent chance of occurrence in next 100 years or has a recurrence interval of greater than every 100 years

The probability, or chance of occurrence, was calculated where possible based on existing data. Probability was determined by dividing the number of events observed by the number of years and multiplying by 100. This gives the percent chance of the event happening in any given year. An example would be three droughts occurring over a 30-year period, which suggests a 10 percent chance of that hazard occurring in any given year.

Element B.1 Hazard Descriptions
Element B.2 Previous Occurrences and Probability of Future Occurrences

Requirement §201.6(c)(2)(i): [The risk assessment shall include a] description of the type, location and extent of all natural hazards that can affect the jurisdiction. The plan shall include information on previous occurrences of hazard events and on the probability of future hazard events.

The profiles for each of the identified hazards are listed below in alphabetical order. Dam failure is addressed in the flood section due to its similar impacts.

DROUGHT

Hazard Description
Drought is a gradual phenomenon. Normally, one dry year does not constitute a drought in California, but rather serves as a reminder of the need to plan for droughts. California's

extensive system of water supply infrastructure (reservoirs, groundwater basins, and interregional conveyance facilities) generally mitigates the effects of short-term dry periods for most water users.

Drought can have secondary impacts. For example, drought is a major determinant of wildfire hazard, in that it creates greater propensity for fire starts and larger, more prolonged conflagrations fueled by excessively dry vegetation, along with reduced water supply for firefighting purposes. Drought is also an economic hazard. Significant economic impacts on California's agriculture industry can occur as a result of short- and long-term drought conditions; these include hardships to farmers, farm workers, packers, and shippers of agricultural products. In some cases, droughts can also cause significant increases in food prices to the consumer due to shortages.

The drought issue is further compounded by water rights specific to any state or region. Water is a commodity possessed under a variety of legal doctrines. The prioritization of water rights between agriculture and federally protected fish habitat in the state is also at issue.

Geographic Extent and Potential Magnitude
Droughts are generally widespread events that could affect all of Kings County and surrounding counties. Impacts include water restrictions associated with domestic supplies, agricultural and livestock losses and economic impacts, hydroelectric power reductions, and increased costs for water. Secondary effects include susceptibility to wildfires and increased groundwater pumping that can contribute to land subsidence problems and degraded water quality.

The magnitude of a drought's impact is directly related to the severity and length. Droughts can be a short-term event over several months or a long-term event that lasts for years or even decades. In Kings County, the onset of drought is often signalled by a lack of significant winter precipitation and snowfall in the Sierra Nevada Mountains. Hot and dry conditions that persist into spring, summer, and fall can aggravate drought conditions, making the effects of drought more pronounced as water demands increase during the growing season and summer months. Impacts increase with the length of a drought, as carry-over supplies in reservoirs are depleted and water levels in groundwater basins decline (California Department of Water Resources 2012).

Previous Occurrences
Historically, California has experienced severe drought conditions. The state's available record for determining hydrologic risks is short, only going back about 100 years. Recent droughts affecting Kings County are summarized below using data from Cal EMA and from the County Agricultural Commissioner's Office.

- **1928-1937**—This drought affected the entire state and is the longest, most severe drought on record with a recurrence interval of greater than 100 years.
- **1947-1950**—Drought affected the entire state but was most extreme in Southern California. The drought in winter of 1950 affected the area from the Kern River

basin north to the American River basin. The drought caused two deaths and $33 million in damages.

- **1976-1977**—The drought of 1976-1977 was most severe in the northern three-quarters of California, but the impact was experienced statewide because of the dependence of southern California on water transfers from the north. The water year 1977 was the driest year of record at almost all gauging stations in the affected area in California, and the water year 1976 was among the five driest in the central and northern Sierra Nevada. The two-year deficiency in runoff accumulated during the drought is unequalled at gauging stations in the affected area; and this deficiency has a recurrence interval that exceeds 80 years. Crop damages statewide were $2.67 billion.
- **1987-1992**—During this multiyear, multi-county drought, the runoff from the San Joaquin Valley was 47 percent of average. In 1991, the U.S. Department of Agriculture Economic Research Report *Agricultural Outlook* reported that the Kings River flow would be inadequate to provide sufficient water for agricultural uses for the fifth consecutive year. A USDA drought disaster declaration was declared.
- **2004-2005**—On January 26, 2005, the USDA designated Kings County a primary disaster area due to drought that had occurred since January 1, 2004.
- **2008-2009** – In June 12, 2008, The Governor proclaimed Kings County as a state disaster area due to the Central Valley Drought.
- **2012** – In September 2012, the USDA designated Kings County a contiguous disaster are due to drought that occurred since January 1, 2012.

Probability of Future Occurrences
Based on the historical record of droughts that have occurred in California since 1862 (143 years). This indicates that California experiences drought on average every 10 years, which is a 10 percent chance of occurring in any given year. In Kings County, based on these probabilities, drought will continue to occur **occasionally** in the future.

EARTHQUAKE

Hazard Description
An earthquake is caused by a sudden slip on a fault. Stresses in the earth's outer layer push the sides of the fault together. Stress builds up and the rocks slip suddenly, releasing energy in waves that travel through the earth's crust and cause the shaking that is felt during an earthquake. The amount of energy released during an earthquake is usually expressed as a magnitude and is measured directly from the earthquake as recorded on seismographs. The magnitude of earthquakes is usually measured using the Richter scale; a logarithmic scale calculated from the amplitude of the largest seismic wave recorded for the earthquake.

Another measure of earthquake severity is intensity. Intensity is an expression of the amount of shaking at any given location on the ground surface. Seismic shaking is typically the greatest cause of damage to structures during earthquakes. Seismologists have developed the Mercalli scale to quantify the shaking intensity of an earthquake's effects, which is measured by how an earthquake is felt by humans and the damage to buildings.

Earthquakes can cause structural damage, injury, and loss of life, as well as damage to infrastructure networks such as water, power, gas, communication, and transportation

lines. Other damage-causing effects of earthquakes are surface rupture, fissuring, settlement, and permanent horizontal and vertical shifting of the ground. Secondary impacts can include landslides, seiches, liquefaction, and dam failure.

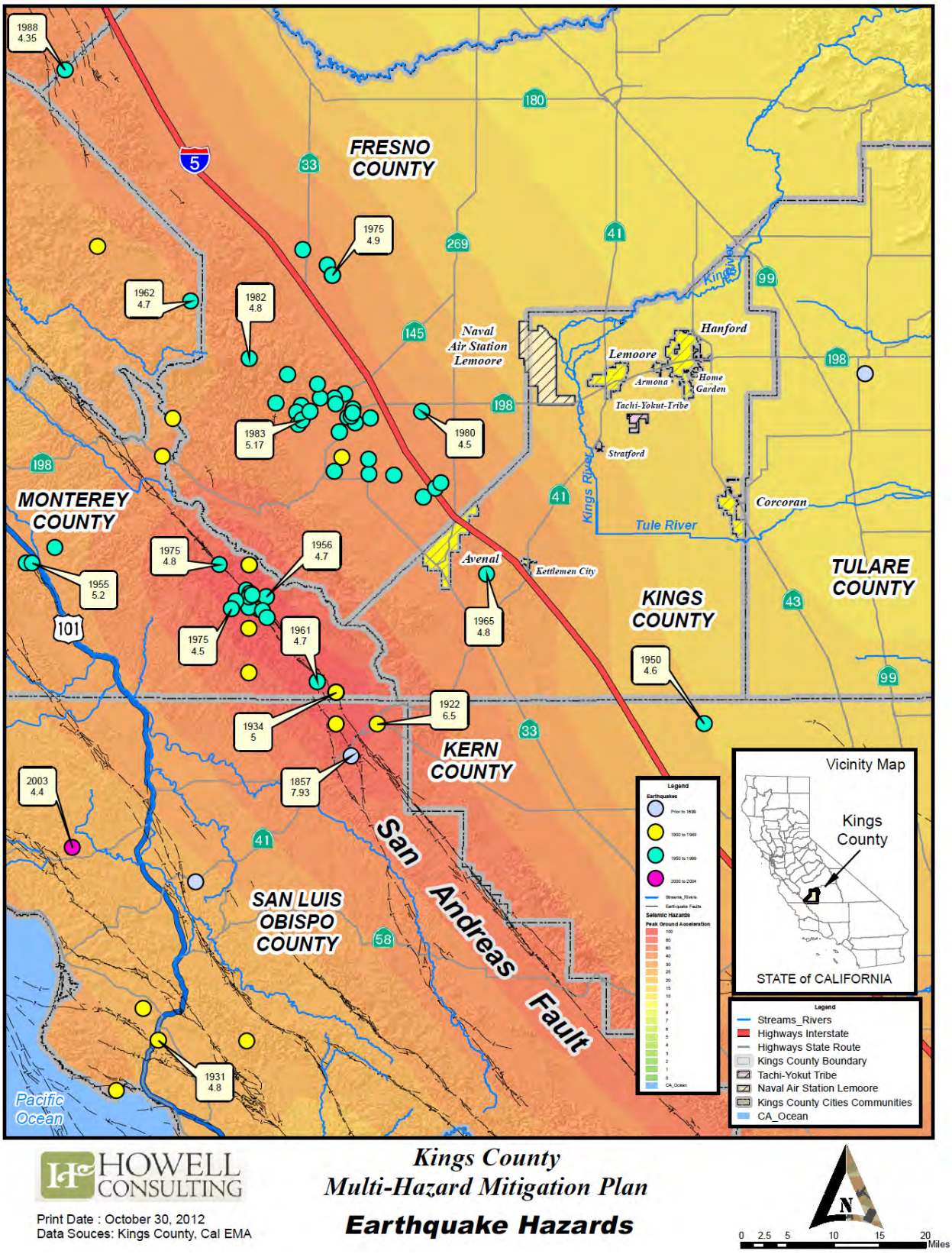
In populated areas, the greatest potential for loss of life and property damage can come as a result of ground shaking from a nearby earthquake. The degree of damage depends on many interrelated factors. Among these are the Richter magnitude, focal depth, distance from the causative fault, duration of shaking, type of surface deposits or bedrock, presence of high ground water, topography, and finally, the design, type, and quality of building construction.

Geographic Extent and Potential Magnitude

No major fault systems are known to exist in Kings County, so the potential for extensive surface rupture is minimal. Minor surface rupture could occur in areas of minor faulting, which occur primarily in the southwestern part of the county along the Kettleman Hills. Ground shaking is the most likely damaging effect of an earthquake. The Planning Team reported that shaking was felt during the Coalinga earthquake of magnitude (M) 6.4 in 1983. The epicenter of the Coalinga earthquake was located approximately 20 miles from the county's western border.

The San Andreas Fault is located less than four miles west of the Kings County line. The San Andreas occurs where the North American and Pacific plates come together and grind in a side-by-side motion relative to each other. Another large known fault, the White Wolf fault, is located to the south near Arvin and Bakersfield and produced a severe M 7.7 earthquake in 1952. The map on the following page shows the known faults, historic epicenters, and potential for ground shaking resulting from earthquakes in and near Kings County.

Kings County Earthquakes Map



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.

Earthquakes can occur at any time of the day or night and any time of the year. Earthquakes are particularly dangerous due to their rapid onset, generally without warning. Aftershocks can occur for days, weeks, and even months following a major earthquake. This additional damage to structures already weakened by the main earthquake increases the danger to rescue and recovery personnel.

Earthquakes can result in many secondary effects, including fires and landslides, which are covered in separate sections of this plan. Ground settlement and soil compaction also may occur as a result of seismic ground shaking. When unconsolidated valley sediments are saturated with water, water from voids 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. Most of Kings County east of Interstate 5 and west of the railroad are mapped as having liquefaction potential referenced in the liquefaction map shown in the landslide hazards section of this plan.

Previous Occurrences

There have not been any damaging earthquakes greater than M 6.0 recorded in Kings County in over 200 years, though several have been very close. The most recent large earthquake near Kings County was the Kettleman Hills earthquake of magnitude 6.1 on August 4, 1985, whose epicenter was located four miles from the Kings County border just north of Avenal. This earthquake was the third in a sequence of moderate earthquakes that occurred along a shallowly dipping thrust fault on the eastern border of the San Joaquin Basin. It was preceded by two earthquakes located approximately 20 miles from Kings County, the 1982 New Idria earthquake (M 5.4) and the 1983 Coalinga (M 6.5). The Kettleman Hills earthquake did not result in any surface rupture. There was a low level of ground shaking and low local magnitude reported (2007 Kings County LHMP).

Major earthquakes have occurred near Kings County and resulted in ground shaking felt in the county. Figure 4.2 shows the historic epicenters of earthquakes in California from 1800-2000. The Fort Tejon earthquake in 1857 of M 7.9 was one of the greatest earthquakes ever recorded in the United States and the largest in California. It left an amazing surface rupture scar over 215 miles in length along the San Andreas Fault. The epicenter is now thought to have been located near Cholame, approximately 34 miles northwest of the Kings County border near Avenal. During the Fort Tejon earthquake, strong shaking lasted from one to three minutes. As a result of the shaking, the current of the Kern River was turned upstream, and water ran four feet deep over its banks. The waters of Tulare Lake were thrown upon its shores, stranding fish miles from the original lakebed. Property loss was heavy at Fort Tejon, one of the only settlements at the time, an Army post in south-central

Kern County about four miles from the San Andreas fault. In 1857, two buildings were declared unsafe, three others were damaged extensively but were habitable, and still others sustained moderate damage. One person was killed in the collapse of an adobe house at Gorman.

Probability of Future Occurrences
Unfortunately, the number and variations of all potential earthquakes are so large that it is not possible to develop scenarios for all of them, nor would it be possible to rank them by importance if such scenarios were developed. To get an idea of the overall scope of the risk of losses from earthquakes and to determine which areas are most vulnerable, CGS uses an alternate approach based on probabilistic seismic hazard analysis (PSHA), which considers all possible earthquakes on all of the possible sources. Using this approach, CGS estimates an expected direct annual loss in California of about $2.2 billion. This is approximately 0.14 percent of the $1.6-trillion total value of the building inventory in the HAZUS database. (HAZUS is FEMA's hazard mapping and damage estimation software and database system.) Indirect losses, such as unemployment, business interruption, loss of market share to other regions or countries, and other economic effects, could be as much as twice the direct losses (California SHMP 2012).

Along the San Andreas Fault, segments exist where no large earthquakes have occurred for long intervals of time. These areas accumulate potential energy and provide clues as to where the next earthquake may occur and when. Scientists term these segments "seismic gaps" and, in general, have been successful in forecasting the time when some of the seismic gaps will produce large earthquakes. Geologic studies show that over the past 1,400 to 1,500 years, large earthquakes have occurred at about 150-year intervals on the southern San Andreas Fault. As the last large earthquake on the southern San Andreas was the Fort Tejon earthquake in 1857, that section of the fault is considered a likely location for an earthquake within the next few decades (USGS 1997).

Based on the earthquake shaking potential mapped for Kings County, the proximity to the San Andreas Fault and the history of shaking but no surface rupture, the probability of damaging seismic ground shaking in Kings County is **occasional.**

EXTREME HEAT
Hazard Description
The tables on the following page show the Heat Index (HI) as a function of heat and relative humidity. The Heat Index describes how hot the heat-humidity combination makes the air feel. As relative humidity increases, the air seems warmer than it actually is because the body is less able to cool itself via evaporation of perspiration. As the Heat Index rises, so do health risks. Specifically:

- When the Heat Index is 90°F, heat exhaustion is possible with prolonged exposure and/or physical activity.
- When it is 90° to 105°F, heat exhaustion is probable with the possibility of sunstroke or heat cramps with prolonged exposure and/or physical activity.
- When it is 105° to 129°F, sunstroke, heat cramps or heat exhaustion is likely, and heatstroke is possible with prolonged exposure and/or physical activity.
- When it is 130°F and higher, heatstroke and sunstroke are extremely likely with continued exposure. Physical activity and prolonged exposure to the heat increase the risks.

The National Weather Service (NWS) will initiate its Heat Index Program Alert procedures when the high temperature is expected to exceed 105° to 110° (depending on local climate) for at least two consecutive days (California SMHP, 2012).

Heat Index Chart

	The Heat Index												
Air Temp (° F)	Relative Humidity												
	40	45	50	55	60	65	70	75	80	85	90	95	100
110 °	136	143	152										
105°	123	129	135	141	148								
100°	111	115	119	124	129	135	141	147					
95°	101	104	107	110	114	117	122	126	131	136	141		
90°	92	94	96	98	100	103	106	109	112	115	119	127	132
85°	84	85	86	88	89	91	93	95	97	99	102	104	107
80°	80	80	81	81	82	82	83	84	84	85	86	86	87
Exposure to full sunshine can increase Heat Index values by up to 15° F.													

Source: California SHMP, 2012

Geographic Extent and Potential Magnitude

The climate in Kings County is hot and arid, and the entire county is susceptible to extreme heat. The agriculturally dominated central region of the county is likely to experience the greatest impacts from large or unseasonable temperature variations. The chart on the following page shows average and extreme temperatures at the Hanford weather station in the northeastern part of the county (1981-2010) and the Kettleman City weather station in the southwestern part of the county (1981-2010). At both stations, the highest temperature on record is 116°F. The average high is 95°F in Hanford in the summer and 97°F in Kettleman City. On average, there are 103 days over 90°F in the summer in Hanford and 114 days per year over 90°F in Kettleman City. The hottest months are July and August.

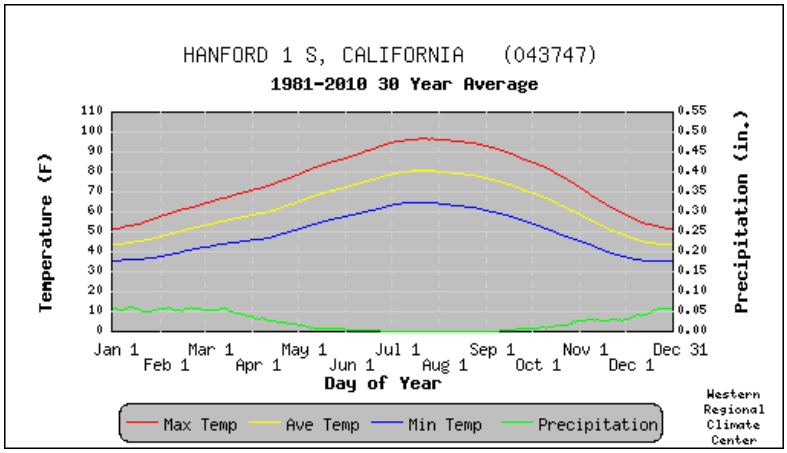
In Kings County, the agricultural industry is most at risk to extreme temperatures. Hot and cold temperature extremes damage crops, affecting the economy and potentially resulting in lost farming jobs. Field workers are susceptible to heat exhaustion and heat stroke. Elderly residents who may live alone and are limited in their mobility are also vulnerable during heat waves.

Problems with power loss and water distribution also occur during periods of extreme heat. Power outages and rolling brownouts can result when high temperatures increase air conditioner use. Power outages can prevent water-pumping stations from operating.

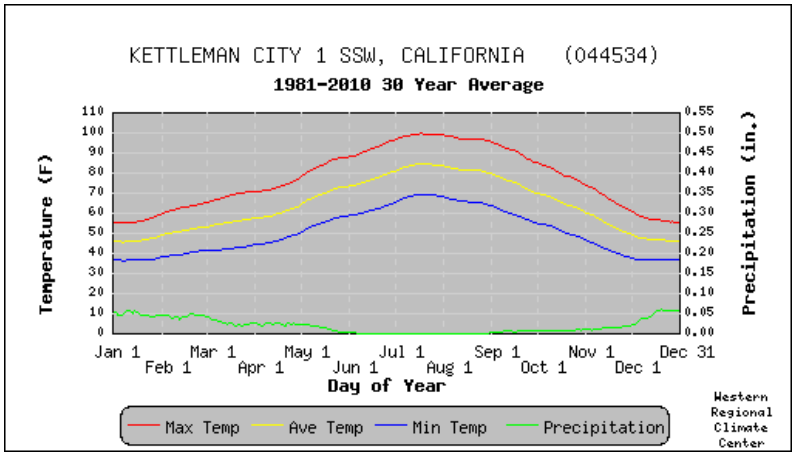
Previous Occurrences

The SHELDUS database lists two incidents of extreme heat in Kings County from 1960-2005. These occurred in June 1961, with $14,700 in crop damages reported, and in September 1998. No damages are known for the 1998 event. During 2005, 2006, 2008, and

2009 Kings County received USDA emergency designations twice for heat waves and again in 2012.



Source: Western Regional Climate Center



Source: Western Regional Climate Center

Legend
Max. Temp. is the average of all daily maximum temperatures recorded for the day of the year between the years 1981 and 2010.
Ave. Temp. is the average of all daily average temperatures recorded for the day of the year between the years 1981 and 2010.
Min. Temp. is the average of all daily minimum temperatures recorded for the day of the year between the years 1981 and 2010.
Precipitation is the average of all daily total precipitation recorded for the day of the year between the years 1981 and 2010.

Probability of Future Occurrences

Temperatures at or above 95°F are common most summer days throughout Kings County, and it is **highly likely** that extreme heat will continue to occur on an annual basis in the future.

FLOOD

Hazard Description

The primary types of flood events in Kings County are riverine and urban. Flooding could also occur as a result of dam failure. Regardless of the type of flood, the cause is often the

result of severe weather and excessive rainfall, either in the flood area, upstream, or from winter snowmelt.

Riverine flooding is the most common type of flood event and occurs when a watercourse exceeds its "bank-full" capacity. Riverine flooding generally occurs as a result of prolonged rainfall, or rainfall that is combined with already saturated soils from previous rain events. The duration of riverine floods may vary from a few hours (flash flood) to many days (slow-rise flooding). Factors that directly affect the amount of flood runoff include precipitation amount, intensity and distribution, the amount of soil moisture, seasonal variation in vegetation, snow depth, and the water resistance of the surface due to urbanization. The warning time associated with slow-rise floods assists with life and property protection.

As the slope of the river flattens, the velocity slows and the material is deposited. As a result, the lower reaches of many streams pass through the sandy alluvial plains that they have formed (Kings County LHMP, 2007). Flood flows can cause these streams to migrate, resulting in a higher and wider floodplain. Developed areas on land originally outside the defined floodplain can later flood.

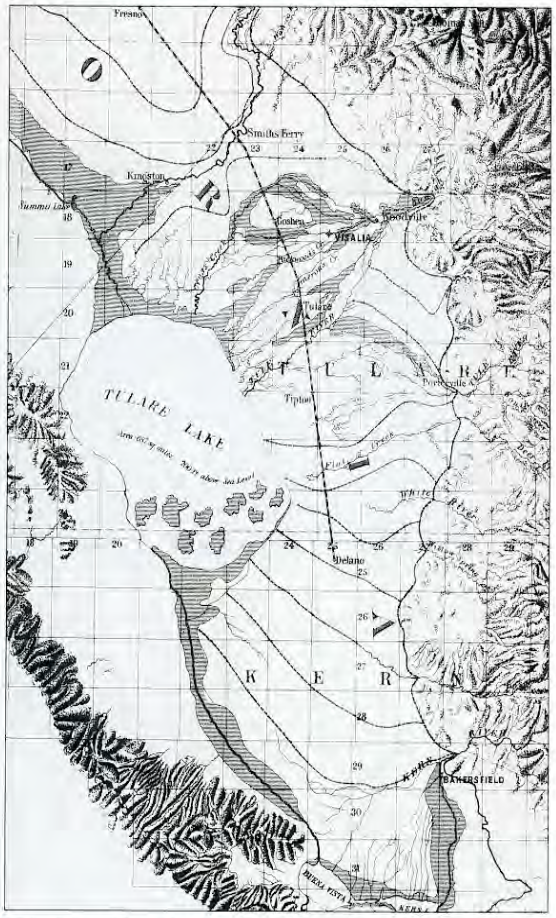
The area adjacent to a river channel is the floodplain. Floodplains are illustrated on inundation maps, which show areas of potential flooding and water depths. In its common usage, the floodplain most often refers to that area that is inundated by the 100-year flood, the flood that has a one percent chance in any given year of being equalled or exceeded. The 100-year flood is the national minimum standard to which communities regulate their floodplains through the National Flood Insurance Program (NFIP).

Urban flooding can occur in any terrain. It is particularly aggravated where natural cover has been removed to construct buildings, roads, and parking lots. Streets become rivers, inundating vehicles and causing damage to residential and industrial properties situated along stream channels (Kings County LHMP, 2007).

Dam failure may also result in flooding, often creating a flash flood. Dams are manmade structures built for a variety of uses including flood protection, power, agriculture, water supply, and recreation. When dams are constructed for flood protection, they usually are engineered to withstand a flood with a computed risk of occurrence. For example, a dam may be designed to contain a flood at a location on a stream that has a certain probability of occurring in any one year. If a larger flood occurs, then that structure will be overtopped. Overtopping is the primary cause of earthen dam failure in the United States. Dam failures can result from any one or a combination of the following causes: prolonged periods of rainfall and flooding resulting in excess overtopping flows, earthquake, improper design and/or maintenance, inadequate spillway capacity, internal erosion, or failure of upstream dams.

Failed dams can create floods that are catastrophic to life and property as a result of the tremendous energy of the released water. A catastrophic dam failure could easily overwhelm local response capabilities and require mass evacuations to save lives. Factors that influence the potential severity of a full or partial dam failure are the amount of water impounded and the distance to, density, type, and value of development and infrastructure located downstream.

The potential for flooding can change and increase through various land use changes and changes to land surface, which result in changes to the floodplain. Environmental changes can create localized flooding problems in and outside of natural floodplains by altering or confining natural drainage channels. These changes are most often created by human activity.



Tulare Lake and the southern San Joaquin Valley in the early 1870s. At the onset of American settlement in the area in the late 1840s, the lake was the largest body of fresh water west of the Great Lakes. Its destruction by the late 1800s because of diking and water diversion for irrigation was one of the most dramatic signs of a major theme in the state's history: the rapid transformation of the wild California landscape into one dominated almost completely by human action. From *Report of the Board of Commissioners on the Irrigation of the San Joaquin, Tulare, and Sacramento Valleys of the State of California* (Washington: Government Printing Office, 1874). *Courtesy Huntington Library.*

Geographic Extent and Potential Magnitude

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.

The Federal Emergency Management Agency (FEMA) and the Federal Insurance Administration have assessed flood hazards for major streams in Kings County. Projected geographic areas and extent of flooding are shown in the map on the following page. The following map shows the extent of flooding from both a 100-year and 500-year flood event. From the map it is clear that a 100-year and 500-year flood are both critical events in Kings County which covers at least 35 to 50 percent of the County. 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.

The average flooding season in Kings County occurs from November through June with the rainy season occurring between November and April and snowmelt in the nearby mountainous area occurring from April to June.

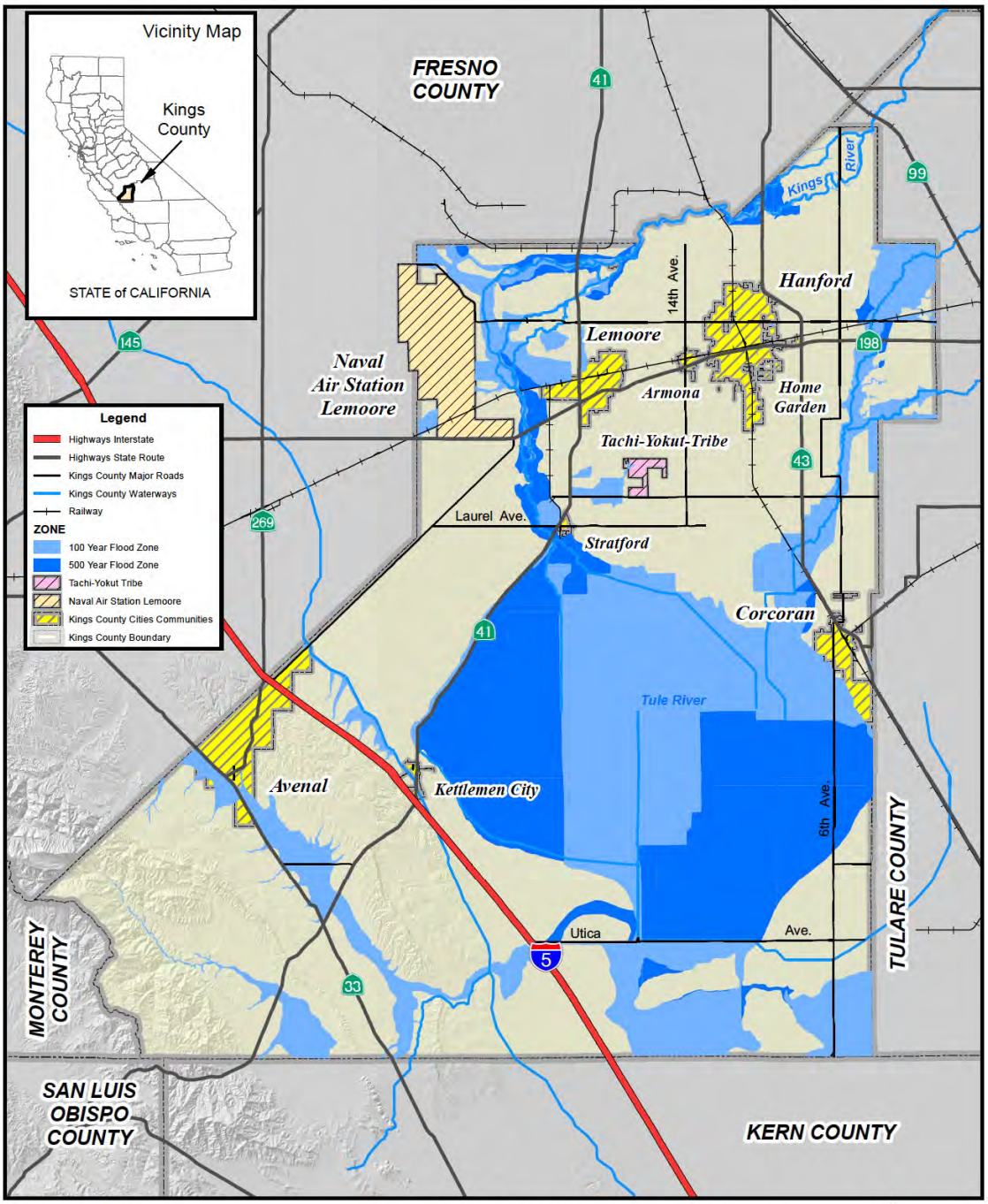
California is divided into 10 hydrologic regions, and Kings County is in the Tulare Lake hydrologic region that comprises the extreme southern portion of the Central Valley. It is defined by the Sierra Nevada Mountains, the divide between the San Joaquin and Kings rivers, the Coast Range, and the Tehachapi Mountains (Kings County LHMP, 2007). Rivers in this region include the Kings, Kaweah, Tule, and Kern, which all historically drained into the Tulare Lake.

Through the late 1800s, Tulare Lake fluctuated but was of substantial size during wet periods. In 1849, the lake measured 570 square miles. Its size fluctuated from year to year due to varying levels of rainfall and snowfall, but it ranked as the largest freshwater lake west of the Great Lakes. A number of small reclamation districts were established in the area in the early 1900s that over time built levees and reclaimed the more than 200,000-acre lakebed for agriculture. The Kaweah, Kern, Kings and Tule rivers were diverted upstream and canals were built to drain the lake. By the end of the nineteenth century the lake had almost completely disappeared. Aggressive groundwater pumping since the draining of the lake has resulted in a significant lowering of the water table, causing subsidence of the land. Because the lake's basin remains, the lake occasionally reappears during floods following unusually high levels of precipitation, as it did in 1997 and 2005. The entire county is criss-crossed by a large number of irrigation canals and ditches operated by several different irrigation districts and companies.

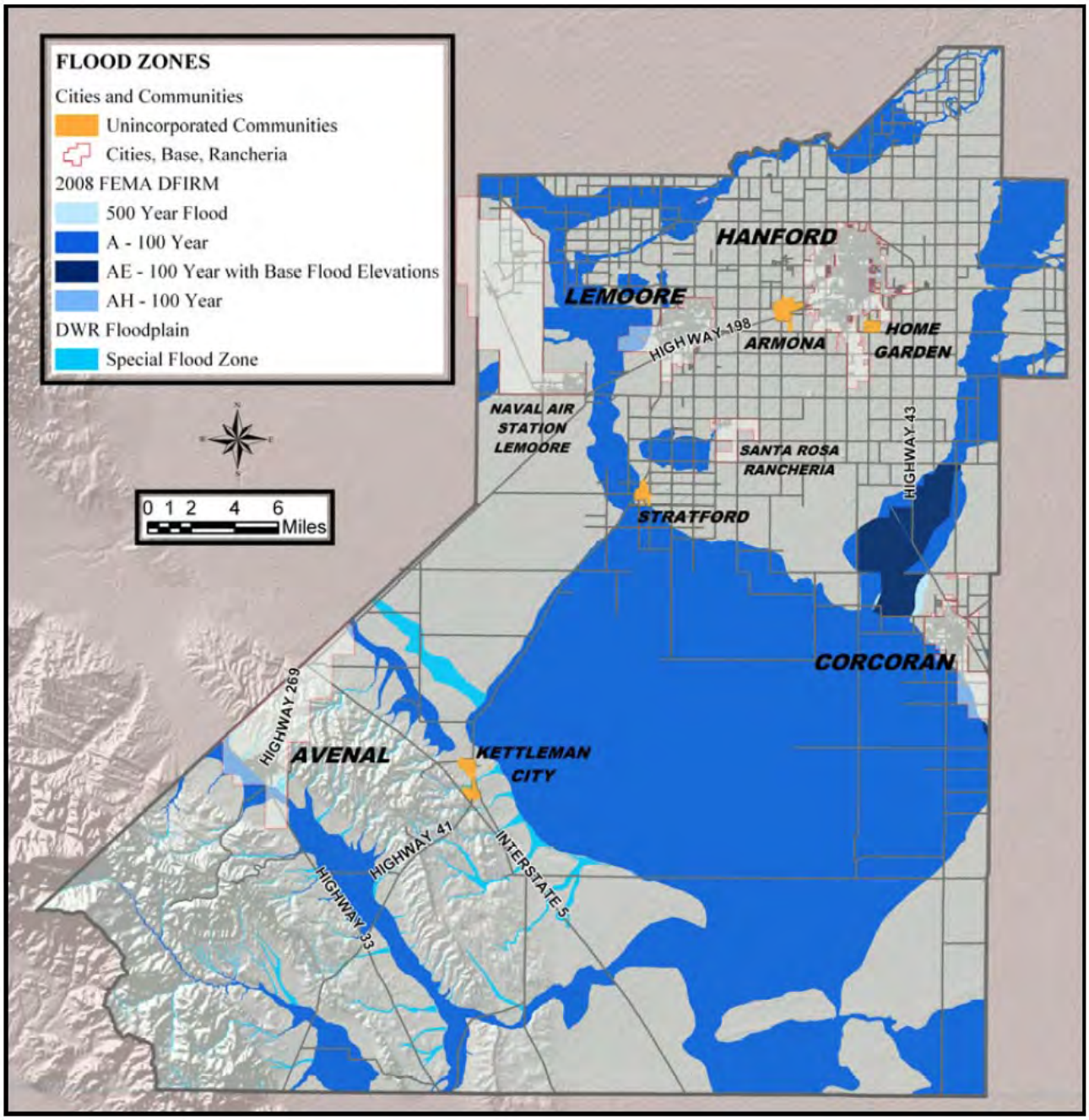
FEMA has assessed flood hazards for major streams in Kings County; these areas are also shown in the map on the following page. Winter rainfall directly affects flooding in Cross Creek and the Tule River. Snowmelt flooding in the spring often causes the Tulare Lakebed to flood, affecting Cross Creek and the Tule River indirectly. The flood hazards in each jurisdiction are discussed in more detail in the jurisdictional annexes to this plan.

The geographic extent and potential magnitude of flooding in Kings County is Critical: between 35-50 percent of the planning area affected.

Kings County 100 and 500 Year Flood Boundary Map

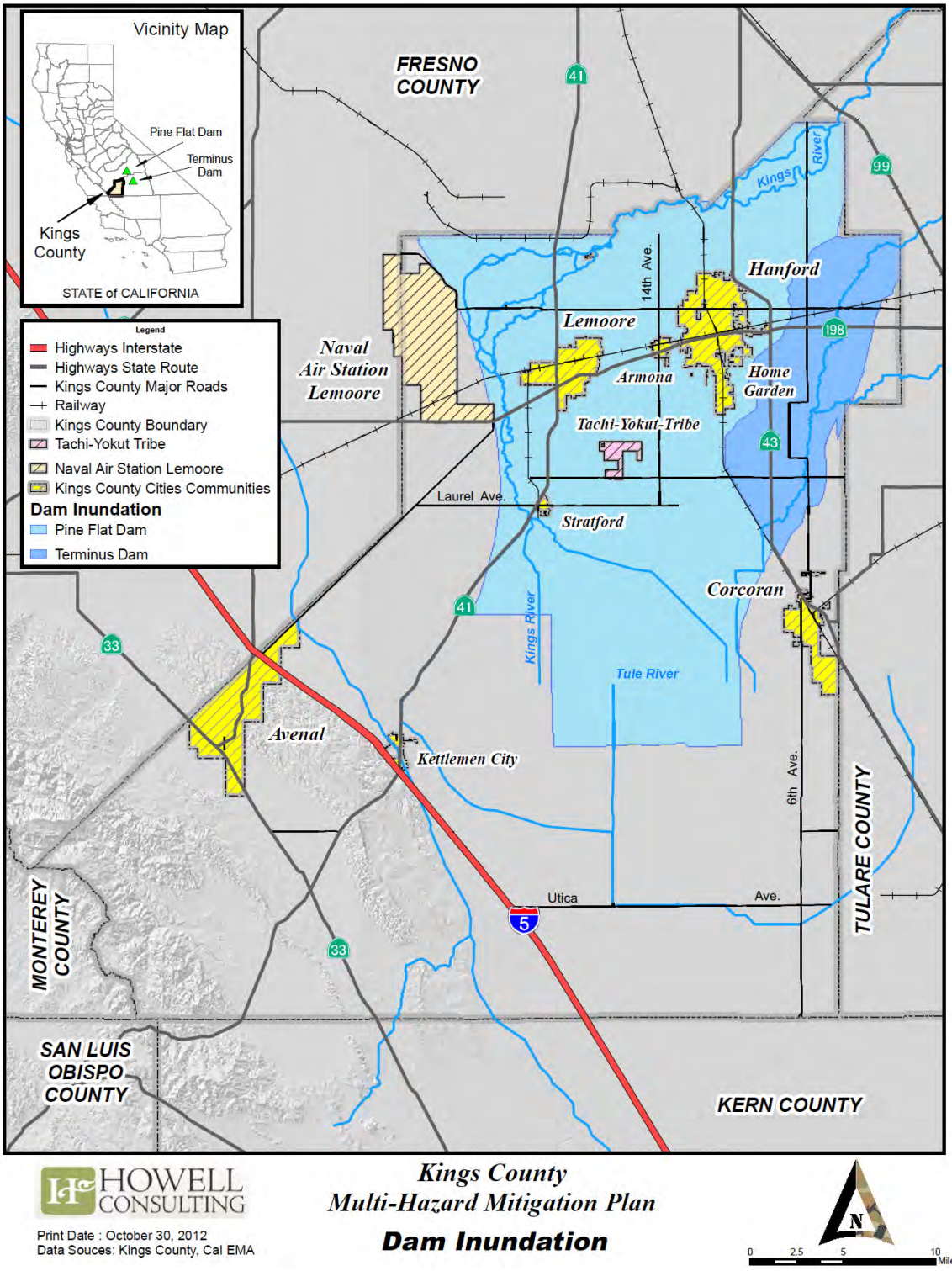


According to the Kings County General Plan, Land Use Element, the Federal Emergency Management Agency (FEMA) has updated the County's Flood Insurance Rate Maps with a new 2008 Digital Flood Insurance Rate Map (DFIRM) shown below, that defines areas subject to 1% chance occurrence (100 year) and 500 year floods. 2008 DFIRM expanded flood plains throughout the County as a result of 2005 post-Katrina Hurricane Levee Certification Guidelines (Code of Federal Regulations , Title 44, Section 65.10) and added approximately 148,000 acres into the County's high risk 100 year flood zone. Additional "Special Flood Hazard" areas have also been identified by the State Department of Water Resources (DWR). Local areas subject to flood hazard are shown on the map below as of



2008.

Kings County Dam Inundation Map



The Terminus, Success, and Pine Flat dams, located in the east of the valley floor on the Kaweah, Tule, and Kings Rivers respectively, in addition to improvements made to other flood control facilities in the Kings County area, have significantly reduced local natural flood hazards. Significant dams near and in Kings County are shown on the map of the previous page. According to the U.S. 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 (Kings County LHMP, 2007). The mapped inundation area for the failure of Terminus Dam covers the area east of Hanford and the railroad, and north of Corcoran to the eastern county line. The inundation area for the failure of Pine Flat Dam is much larger, covering the northern third of the county, east of the Lemoore Naval Air Station and west of Corcoran, south to the El Rico Main Canal. Controlled releases sometimes result in localized flooding or complete inundation of flood-prone areas within Kings County. Severe weather, unexpected runoff, or mechanical malfunctions may generate these releases (Kings County LHMP, 2007).

Previous Occurrences
Between 1992 and 2002, every county in California was declared a federal disaster area at least once for a flooding event. California has a chronic and destructive flood history. Half of the 72 federally declared disasters in California between 1950 and 2000 were flood related. Historically, floods have been the most frequent cause of disaster in Kings County. The primary cause of local flooding is the drainage pattern in the Tulare Lake Basin. This area has no outlet to the ocean unless the water is pumped by artificial means out of the Tulare Lake Basin (Kings County LHMP, 2007).

Significant flooding occurs in Kings County approximately every five years. Kings County was declared a disaster area by the federal government eight times between 1955 and 2012. FEMA's Flood Insurance Study listed flooding events in 1950, 1952, 1955, 1958, 1962, 1963, 1966, 1967, 1969, 1970, 1971, 1973, 1978, 1980, 1982, 1985, 1986, 1995, 1997 and 2010. Heavy snow runoff caused flooding in Kings County in January of 1969. Kings was the only county designated in this federal disaster declaration. Damage included $1.56 million in public costs and $1.25 million in private costs for a total of $2.81 million.

Probability of Future Occurrences
Due to the history of past flooding events and the natural drainage pattern of the planning area, flooding in the Tulare Lake Basin is **likely** to continue to occur. There is no evidence to indicate that flooding due to dam failure is likely.

FOG

Hazard Description
Fog results from air being cooled to the point where it can no longer hold all of the water vapour it contains. For example, rain can cool and moisten the air near the surface until fog forms. A cloud-free, humid air mass at night can lead to fog formation, where land and water surfaces that have warmed up during the summer are still evaporating water into the atmosphere. This is called radiation fog. A warm moist air mass blowing over a cold surface also can cause fog to form, which is called advection fog. The interior California valleys have a unique fog problem called the tule fogs. Tule fogs are "radiated" out of the ground and can develop into several layers of fog that can be thousands of feet thick. The fog develops in the San Joaquin Valley when calm, stable air conditions combine with moisture in the ground and a chilling factor. The tule fogs get their name from the tule reeds, which grew around

the swamps and deltas of the great Tulare Lake that once covered the southern end of the San Joaquin Valley.

Geographic Extent and Potential Magnitude
The tule fog season in Kings County is typically December through February. Fog typically forms rapidly in the early morning hours. Tule fogs can last for days, sometimes weeks. Fog can have devastating effects on transportation corridors in the county. Nighttime driving in the fog is dangerous and multi-car pileups have resulted from drivers using excessive speed for the conditions and visibility.

Fog contributes to transportation accidents and is a significant life safety hazard. These accidents can cause multiple injuries and deaths and could have serious implications for human health and the environment if a hazardous or nuclear waste shipment were involved. Other disruptions from fog include delayed emergency response vehicles and school closures.

Previous Occurrences
Between 1962 and 2003, the SHELDUS database recorded 13 incidents of damaging fog, responsible for 4 deaths, 23 injuries, and approximately $200,000 in property damage. Since the 2007 planning effort, between 2003 and 2012, the same SHELDUS database has recorded 7 additional incidents of damaging fog with 4 injuries and 0 deaths, and approximately $159,000 in property damage. Most damages are a result of automobile accidents. All incidents occurred between the months of November and February.

Probability of Future Occurrences
Fog occurs every year in Kings County, and damaging fog events have occurred every three years on average since 1962. Probability is **highly likely** that fog will occur on an annual basis and that damaging fog events will continue to occur every few years.

FREEZE

Hazard Description
Unseasonable cold temperatures can have large impacts on crops in Kings County. The growing season is approximately 257 days per year, and the frost-free period usually extends from mid-February to mid-November. The mean frost-free period in the western part of the county is 225-250 days.

Geographic Extent and Potential Magnitude
The entire county is susceptible to extreme temperatures.

Average annual snowfall at both Hanford and Kettleman City is zero. The maximum amount of snowfall recorded was two inches in Hanford, which occurred in January 1962; there has not been any measurable snowfall recorded since then. There is no recorded snowfall in Kettleman City.

Prolonged freezing temperatures can damage or destroy crops, affecting the economy and agricultural jobs in Kings County. Water infrastructure is also at risk from freezing, including line breaks and frozen valve gates affecting the distribution system.

Previous Occurrences

The SHELDUS database records six incidents of freezes and severe cold between 1970 and 2005. No injuries or deaths are recorded but millions of dollars in crop damage occurred. There have been two state emergency declarations, in 1972, 1999 and 2007 for freezes in Kings County.

In 1999 and 2007, a state emergency was declared for severe freeze events that occurred. In 2007, 2009 and 2011 and 2012 the USDA designated Kings County as a disaster area due to Freeze and extreme cold. During these events, California's San Joaquin Valley farming communities were hit with freezing temperatures that severely affected the region's crops and resulted in Presidential disaster declarations. The declarations made federal funds available to supplement unemployment compensation for farm laborers and other farm industry workers put out of work as a direct result of lost seasonal crops.

Probability of Future Occurrences
In the past, severe freezes have occurred every few years. Damaging freezes are recorded for the last 36 years, which is an average of once every five years or a probability of 19 percent in any given year. Therefore, the probability of future occurrence is **likely**.

LANDSLIDE

Hazard Description
Landslides can refer to a wide variety of processes that result in the perceptible downward and outward movement of soil, rock, and vegetation under gravitational influence. Common names for landslide types include slump, rockslide, debris slide, lateral spreading, debris avalanche, earth flow, and soil creep. 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 occur 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. Debris flows are another type of landslide, which generally occur in the immediate vicinity of existing drainage swales or steep ravines. Debris flows occur when near-surface soil in or near steeply sloping drainage swales becomes saturated during unusually heavy precipitation and begins to flow downslope at a rapid rate.

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. Landslides can occur slowly or very suddenly and can damage and destroy structures, roads, utilities, and forested areas and cause injuries and death.

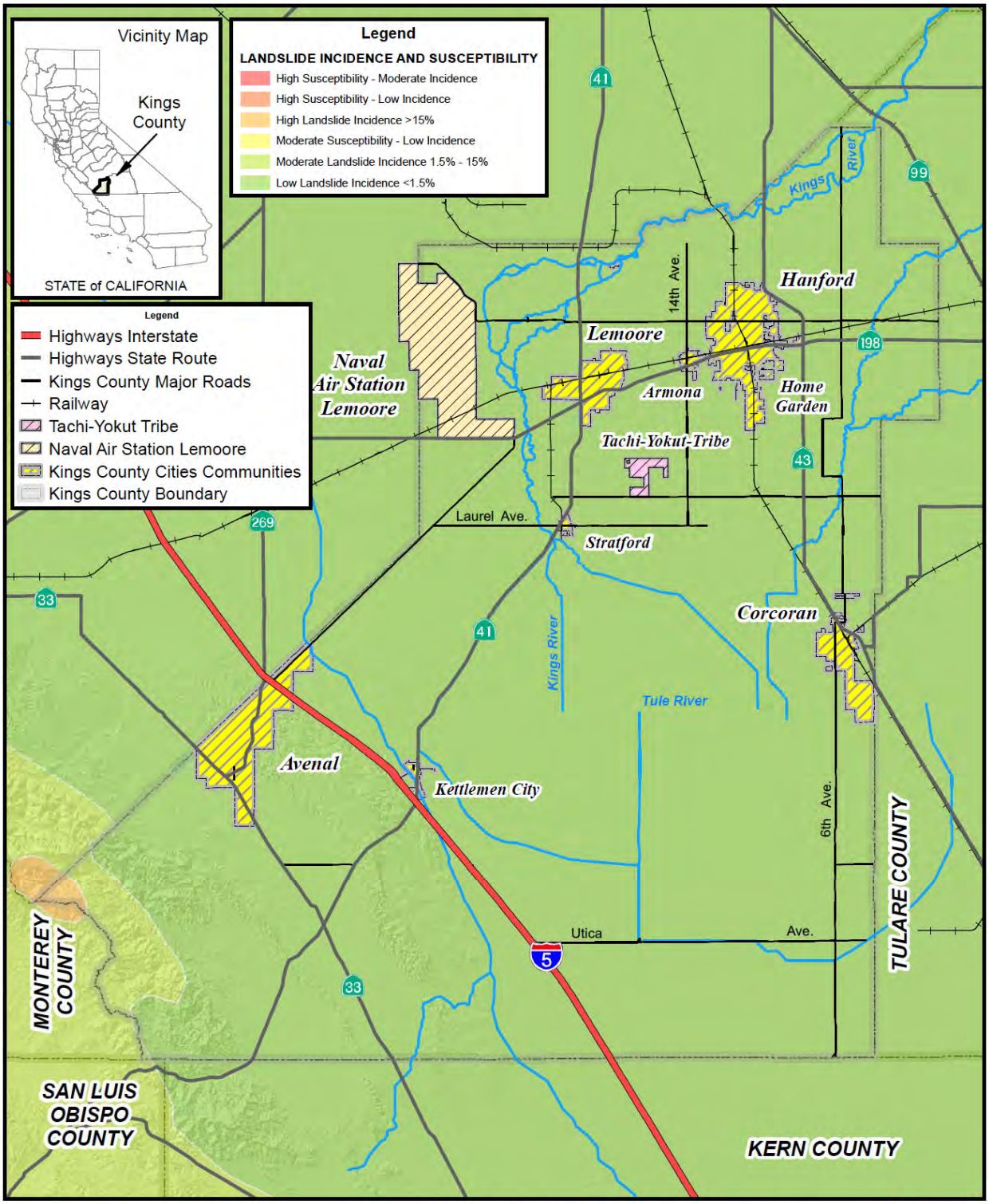
Geographic Extent and Potential Magnitude
Landslide hazards are uncommon through much of the county due to the flat topography. Risk is greater in the southwestern part of the county, including the Kettleman Hills, due to the more varied elevations and steeper slopes.

Winter and spring are typically the landslide/rock-fall seasons in California as rain falls and snow melts and saturates soils and temperatures enter into freeze/thaw cycles. Debris and mud flows generally occur during summer cloudbursts. Debris and mudslides and rock-fall can occur rapidly with little warning during torrential rains. Landslides typically have a slower onset and can be predicted to some extent by monitoring soil moisture levels and ground cracking or slumping in areas of previous landslide activity. The map on the following page shows the landslide hazards in Kings County.

Previous Occurrences
The Planning Team noted that in the past, landslides have occurred in the western part of the county, particularly in burn areas and after heavy rains. Heavy rain events caused a slope failure around a water line for Avenal in 1995, 1998, 2008 and 2010.

Probability of Future Occurrences
There is limited data on past events, but **occasional** landslides and debris flows are likely to occur in the western part of to the county in the future.

Kings County Landslide Hazard Map



HOWELL CONSULTING

Print Date : October 30, 2012
Data Souces: Kings County, Cal EMA

Kings County Multi-Hazard Mitigation Plan

Landslide Hazard

TORNADO

Hazard Description

Tornadoes are rotating columns of air marked by a funnel-shaped downward extension of a cumulonimbus cloud whirling at destructive speeds of up to 300 miles per hour (mph). They usually accompany a thunderstorm. Tornado magnitude is ranked according to the Enhanced Fujita scale listed below:

Enhanced Fujita Tornado Scale

- EF0: 65-85 mph
- EF1: 86-110 mph
- EF2: 111-135 mph
- EF3: 136-165 mph
- EF4: 166-200 mph
- EF5: Over 200 mph

Geographic Extent and Potential Magnitude

Based on National Climate Data Center (NCDC) data, tornado behavior, tornadoes are more likely to hit the flatter, lower elevations of Kings County and are more common in the eastern parts of the county around Hanford, Lemoore, and Corcoran. Tornadoes develop rapidly and can occur without warning. The National Weather Service can predict the weather patterns that produce tornadoes and issue tornado warnings or watches when warranted. Most tornadoes last less than 10 minutes, though some have been observed to last an hour. Tornadoes in California are rarely severe, however, even small tornadoes can be damaging if they hit a populated area. Because the likelihood is small and the duration typically short, the expected average damage from a tornado in Kings County is considered to be slight.

Previous Occurrences

The NCDC and the SHELDUS databases report six occurrences of tornados and several funnel clouds on record between 1960 and 2005 in Kings County. All of these events occurred during fall and spring between October and April. Most of the tornados were ranked as F0 on the Fujita Scale and did not result in property damage. However, on November 22, 1996, a F1 tornado caused about $250,000 in damage at the Lemoore Naval Station. Damage included roof removal of the base recycling center, and wind damage to several administrative structures, power lines and poles, and fixed structures (NCDC, 2012). The table on the following page lists recorded tornado events for Kings County.

In 2008, soon after the adoption of the previous LHMP 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 root spanning 4,600 square feet was torn off. Even though this event was not classified as a tornado, 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 proclaimed by Kings

County and later by the Governor.

Recorded Tornadoes in Kings County, 1950-2006

Location	Date	Magnitude	Deaths/Injuries	Property Damage	Crop Damage
Kings	11/01/1964	F0	0/0	0	0
Kings	04/05/1980	F2	0/1	$250,000	0
Kings	10/12/1991	F0	0/0	0	0
Lemoore	03/05/1994	F0	0/0	0	0
Hanford	03/12/1996	F0	0/0	$10,000	0
Lemoore Naval Air Station	11/12/1996	F1	0/0	$250,000	0

Source: NCDC, 2012

Probability of Future Occurrences
During the 56 years of record, 6 days of tornadoes have been recorded in Kings County or one tornado every 7 years on average. This equates to an annual chance of occurrence of about 11 percent. There are no official recurrence intervals calculated for tornadoes. However, if one assumes a tornado affects only one square mile and there are 1,435 square miles in Kings County, the annual probability of a tornado hitting any particular square mile in the planning area is .107 in 1,435 or a 0.007 percent chance. Probability is **occasional.**

WILDFIRE

Hazard Description
Fire conditions arise from a combination of hot weather, an accumulation of vegetation, and low moisture content in the air. These conditions, when combined with high winds and periods of drought, increase the potential for wildfire. Fires also occur in areas where development has expanded into rural areas. In this wildland-urban interface, fires can result in major losses of property and structures. Generally, there are three major factors that sustain wildfires and are used to predict a given area's potential to burn: fuel, topography, and weather.

Fuel is the material that feeds a fire and is a key factor in wildfire behavior. Fuel is generally classified by type and by volume. Fuel sources are diverse and include everything from dead tree needles and leaves, twigs, and branches to standing dead trees, live trees, brush, and cured grasses. Manmade structures and other associated combustibles are also fuel sources. The type of prevalent fuel directly influences the behavior of wildfire. Light fuels, such as grasses, burn quickly and serve as a catalyst for fire spread. The volume of available fuel is described in terms of fuel loading.

Topography affects an area's susceptibility to wildfire spread. Fire intensities and rates of spread increase as slope increases due to the tendency of heat from a fire to rise via convection. The natural arrangement of vegetation throughout a hillside can also contribute to increased fire activity on slopes. Topography also affects the ability of response crews and vehicles to reach fires in a timely manner due to steep and winding roads.

Weather components, such as temperature, relative humidity, wind, and lightning, also affect the potential for wildfire. High temperatures and low relative humidity dry out the

fuels that feed the wildfire creating a situation where fuel will more readily ignite and burn more intensely. Wind is the most treacherous weather factor. The greater wind speed, the faster a fire will spread, and the more intense it will be. In addition to high winds, wind shifts can occur suddenly due to temperature changes or the interaction of wind with topographical features, such as slopes or steep hillsides. Related to weather is the issue of recent drought conditions contributing to concerns about wildfire vulnerability. During periods of drought, the threat of wildfire increases.

Geographic Extent and Potential Magnitude

In most of Kings County, the California Department of Forestry and Fire Protection (Cal Fire) ranks fuel loading as low. Fuels are mainly crops and grasses. In the southwest corner, there are some brush, pine, and grass fuels, which are ranked as moderate fuel hazards, primarily in the area west of Interstate 5 and north of Highway 41. See the map on the following page that shows the wildfire hazard in Kings County.

Most of Kings County is flat, sloping slightly towards a topographic low point in the Tulare Lake Basin, which reduces the fire hazard through much of the county. However, elevations in the southwestern portion of the county are more varied, ranging from 500 feet at the Kettleman Plains to an elevation of 3,499 feet at Table Mountain. Fire hazard is high in the more steeply sloped areas of this southwestern section.

Generally, fire season in Kings County extends from early spring to late fall. Onset can happen suddenly due to lightning or human causes and wildfires can last from a few hours to a few months. Secondary effects from wildfire include increased erosion, degraded air and water quality, and economic impacts from burned landscapes.

Previous Occurrences

There have not been any state or federal disaster declarations in Kings County related to wildfire in the past. The Planning Team noted that although there are many fire starts, the fuels are “flashy” and fires are usually quickly put out. The table below shows historic fires mapped by Cal Fire. Except for the Braley-Jones Ranch fire in 1951 near Stratford, all other mapped fires occurred west of Interstate 5. The largest was the Skyline fire in 1996, which burned over 20,000 acres along the west side of Interstate 5, north of Highway 41 and east of Avenal.

Fire History in Kings County, 1950-2007

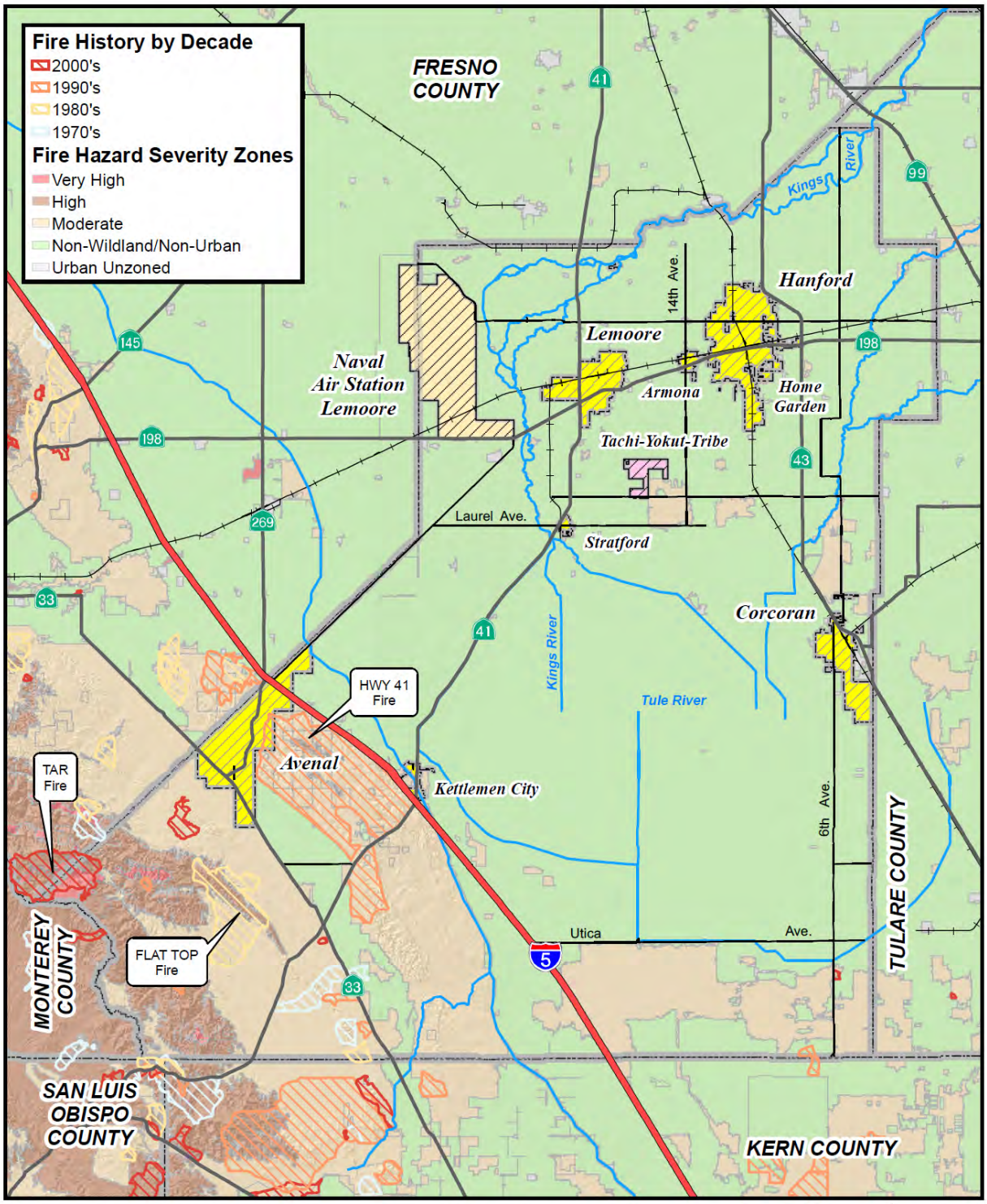
Date	Name of Fire	Acres Burned	Agency
06/04/1951	Braley-Jones Ranch	468	Cal Fire
09/22/1968	Hughs	776	Cal Fire
07/30/1969	Avenal Canyon	983	Cal Fire
05/22/1979	Pyramid Hills	693	Cal Fire
07/01/1979	State of California #32	2,292	Cal Fire
05/25/1984	Flat Top	7,218	Cal Fire
06/03/1989	Cal Oil	492	Cal Fire
06/12/1994	York	1,012	Cal Fire
09/04/1995	Tar	126	Cal Fire
09/08/1995	Pyramid	397	Cal Fire
04/27/1996	Skyline	20,567	Cal Fire
05/01/1996	Hwy 41	3,198	Cal Fire
08/13/1999	33	243	Cal Fire
08/27/2001	Taylor	26	Cal Fire
08/10/2007	Tar	5,644	Cal Fire

Source: Cal Fire Redbooks

Probability of Future Occurrences

Fire starts are highly likely during each fire season; though, they rarely result in large-scale wildfires. Information obtained from the Cal Fire Redbook lists multiple fires, the largest consuming less than 300 acres and most being controlled at less than 10 acres. Fifteen major fires are mapped for the last 56 years, which averages to almost one fire every four years, or a 25 percent chance of occurrence in any given year. Based on climate and weather in Kings County and the fuels, topography, and fire history in the southwestern part of the county, it is **likely** that fires will continue to occur in the future.

Kings County Wildfire Hazards Map



HOWELL CONSULTING

Print Date : October 30, 2012
Data Souces: Kings County, Cal EMA

Kings County Multi-Hazard Mitigation Plan

Wildfire Hazards

Summary of Hazards

The table below summarizes the results of the hazard profiles and assigns a level of overall planning significance to each hazard of low, medium, or high. Significance was determined based on the hazard profile, focusing on key criteria such as frequency and resulting damage, including deaths/injuries and property, crop, and economic damage. This assessment was used by the Planning Team to prioritize those hazards of greatest significance to the operational area; thus enabling the County to focus resources where they are most needed. Those hazards that occur infrequently or have little or no impact on the operational area were determined to be of low significance.

Hazard Profile Summary by Jurisdiction

The following tables summarize the data provided by the Planning Team on the potential magnitude and the probability of occurrence for each of the identified hazards across the planning area.

Probability of Occurrence for Identified Hazards in Kings County

Hazard	Kings County	Avenal	Corcoran	Hanford	Lemoore
Dam Failure	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely
Drought	Occasional	Occasional	Occasional	Occasional	Occasional
Earthquake	Occasional	Occasional	Occasional	Occasional	Occasional
Extreme Heat	Highly Likely	Highly Likely	Highly Likely	Highly Likely	Highly Likely
Flood	Likely	Likely	Likely	Occasional	Occasional
Fog	Highly Likely	Highly Likely	Highly Likely	Highly Likely	Highly Likely
Freeze	Likely	Occasional	Likely	Likely	Likely
Landslide	Occasional	Occasional	Unlikely	Unlikely	Unlikely
Tornado	Occasional	Unlikely	Occasional	Occasional	Occasional
Wildfire	Likely	Occasional	Unlikely	Unlikely	Unlikely

Source: Kings County Planning Team

Potential Magnitude of Identified Hazards in Kings County

Hazard	Kings County	Avenal	Corcoran	Hanford	Lemoore
Dam Failure	Catastrophic	Negligible	Critical	Critical	Catastrophic
Drought	Critical-Catastrophic	Critical	Critical	Critical	Limited
Earthquake	Critical	Critical	Critical	Critical	Critical
Extreme Heat	Limited	Limited	Limited	Limited	Limited
Flood	Critical	Critical	Critical	Limited	Limited
Fog	Limited	Limited	Limited	Limited	Negligible
Freeze	Limited	Limited	Limited	Limited	Negligible
Landslide	Negligible	Critical	Negligible	Negligible	Negligible
Tornado	Negligible	Negligible	Limited	Limited	Limited
Wildfire	Critical	Limited	Negligible	Negligible	Negligible

Source: Kings County Planning Team

B.3. Vulnerability Assessment

§201.6(c)(2)(ii): [The risk assessment shall include a] description of the jurisdiction's vulnerability to the hazards described in paragraph (c)(2)(i) of this section. This description shall include an overall summary of each hazard and its impact on the community. All plans approved after October 1, 2008 must also address NFIP insured structures that have been repetitively damaged by floods.

§201.6(c)(2)(ii)(A): The types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard areas;

§201.6(c)(2)(ii)(B): An estimate of the potential dollar losses to vulnerable structures identified in ... this section and a description of the methodology used to prepare the estimate.

§201.6(c)(2)(ii)(C): Providing a general description of land uses and development trends within the community so that mitigation options can be considered in future land use decisions.

Methodology
The vulnerability assessment further defines and quantifies populations, buildings, critical facilities, and other community assets at risk to natural hazards. The vulnerability assessment for this plan followed the methodology described in the FEMA 386-2, *Understanding Your Risks – Identifying Hazards and Estimating Losses* (2012).

The vulnerability assessment was conducted based on the best available data and the significance of the hazard. Data to support the vulnerability assessment was collected from the following sources:

- County and jurisdictional GIS data (hazards, base layers, and other government data)
- Statewide GIS datasets compiled by Cal EMA to support mitigation planning
- FEMA's HAZUS loss estimation software
- Written descriptions of assets and risks provided by participating jurisdictions
- Existing plans and reports
- Personal interviews with Planning Team members and other stakeholders

The vulnerability assessment first describes the assets at risk in Kings County, including the total exposure of people and property; critical facilities and infrastructure; natural, cultural, and historic resources; and economic assets. Secondly, the assessment considers the social vulnerability of the county to hazards, including characteristics of gender, age, race/ethnicity, and wealth and poverty.

Assets at Risk
This section assesses the population, structures, critical facilities and infrastructure, and other important assets in Kings County at risk to natural hazards.

Total Exposure to Hazards
The table on the following page shows the total population, number of structures, and assessed value of improvements to parcels by jurisdiction. Land values have been purposely excluded because land remains following disasters, and subsequent market devaluations are frequently short term and difficult to quantify. Additionally, state and federal disaster

assistance programs generally do not address loss of land or its associated value.

The greatest exposure of people and property are concentrated in Hanford, though significant population and structures are spread out in the unincorporated areas of the county. The Lemoore Naval Air Station is not included in this data, because the station independently undertakes hazards mitigation and other emergency planning and did not participate in this planning process.

Maximum Population and Building Exposure by Jurisdiction

Jurisdiction	Exposed Population	Buildings	
		Number	Value
Kings County Unincorporated Areas	34,1786	9,707	$1,028,530,819
Avenal	15,505	1,754	$128,111,815
Corcoran	24,813	2,966	$257,957,828
Hanford	53,967	14,080	$1,991,860,304
Lemoore	24,531	5,913	$853,282,697
Total	**152,982**	**34,420**	**$4,259,743,463**

Source: Kings County Planning Team data, 2010 U.S. Census

Critical Facilities and Infrastructure

A critical facility may be defined as one that is essential in providing utility or direction either during the response to an emergency or during the recovery operation. FEMA's HAZUS loss estimation software uses the following three categories of critical assets (Essential Facilities, High Potential Loss Facilities and Transportation and Lifelines). Essential facilities are those that if damaged would have devastating impacts on disaster response and/or recovery. High potential loss facilities are those that would have a high loss or impact on the community. Transportation and lifeline facilities are a third category of critical assets.

Essential Facilities	High Potential Loss Facilities	Transportation and Lifelines
• Hospitals and other Medical Facilities • Police Stations • Fire Stations • Emergency Operation Centers	• Power Plants • Dams/levees • Military installations • Hazardous Material Sites • Schools • Shelters • Day Care Centers • Nursing Homes • Main Government Buildings	• Highways, Bridges and Tunnels • Railroads and Facilities • Bus Facilities • Airports • Water Treatment Facilities • Natural Gas Facilities and Pipelines • Oil Facilities and Pipelines

The table on the following page displays the inventory of available data on essential facilities in Kings County as provided by HAZUS. The HAZUS scenario uses a 5.0 magnitude to define the earthquake parameters used for the earthquake loss estimate.

Essential Facility Damage

HAZUS Estimated Essential Facility Damage – 5.0 M Earthquake

Before the earthquake, the region had 148 hospital beds available for use. On the day of the earthquake, the model estimates that only 141 hospital beds (95.00%) are available for use by patients already in the hospital and those injured by the earthquake. After one week, 100.00% of the beds will be back in service. By 30 days, 100.00% will be operational.

Classification	Total	# Facilities		
		At Least Moderate Damage > 50%	Complete Damage > 50%	With Functionality > 50% on day 1
Hospitals	4	0	0	4
Schools	72	0	0	72
EOCs	0	0	0	0
PoliceStations	7	0	0	7
FireStations	5	0	0	5

Other facilities in the county, such as locations that hold musical concerts, sporting events, and other events that attract large numbers of people, may also be at higher risk due to concentrations of population. These include, but are not limited to, the Kings County Fairgrounds, the Tachi Palace Casino and Resort, Hanford Bowl, Hanford High School Presentation Center, West Hills College Sports Facility, two hospitals (Home Garden – Adventist Health Rural Health Clinics, Hanford Adventist Health Medical Center, high school campuses and county or city parks.

Other critical facilities unique to the county are the California Aqueduct, Kettleman Hills Hazardous Waste Facility, and the Lemoore Naval Air Station. These facilities are described further on the following page. The Corcoran and Avenal State Prisons are also considered unique facilities; however, these facilities are better addressed in the emergency operations plans for the county and the two municipalities.

The **California Aqueduct**, part of the California State Water Project, runs through the western part of Kings County. The State Water Project is a water storage and delivery system of reservoirs, aqueducts, power plants, and pumping plants. Its main purpose is to store water and distribute it to 29 urban and agricultural water suppliers in Northern California, the San Francisco Bay Area, the San Joaquin Valley, the Central Coast, and Southern California. Seventy percent of the contracted water supply goes to urban users and thirty percent goes to agricultural users. The State Water Project makes deliveries to two-thirds of California's population. Earthquakes, landslides, flooding, or other hazard events that disrupt the aqueduct's ability to deliver water could have serious impacts to agriculture in the county and water users in many areas of California.

The **Kettleman Hills Hazardous Waste Facility** is a chemical waste disposal and treatment site with a capacity of 5,700,000 cubic yards, operated by Chemical Waste Management. The site is located four miles from Kettleman City and less than three miles west of Interstate 5. The 1,600-acre site employs 120 people and accepts waste from all over the western United States but primarily California. The facility is one of less than 30 commercial chemical waste sites in the country and one of less than 10 sites licensed to take polychlorinated biphenyls (PCBs).

The integrity of the hazardous waste site was breached in March 1988 when a landslide surged forward and downslope, tearing out part of the liner system and displacing waste deposited at the site. The incident may have been caused by design defects of the facility; however, the incident indicates that the facility may be vulnerable to seismic hazards present in the Kettleman Hills area. Water contamination is a concern in a seismic event from this facility.

The **Lemoore Naval Air Station** encompasses 4.2 square miles in Kings County and includes critical facilities, such as medical facilities and an airport. It is also one of the largest employers in the county, with 1,300 civilian employees. Although this plan recognizes the critical assets of the station and its role in the county's economy, as federally owned property, the station develops separate emergency management plans.

Natural, Historical, and Cultural Assets
Assessing the vulnerability of Kings County to disaster also involves inventorying the natural, historical, and cultural assets of the area. This step is important for the following reasons:

- The community may decide that these types of resources warrant a greater degree of protection due to their unique and irreplaceable nature and contribution to the overall economy.
- If these resources are impacted by a disaster, knowing so ahead of time allows for more prudent care in the immediate aftermath, when the potential for additional impacts are higher.
- The rules for reconstruction, restoration, rehabilitation, and/or replacement are often different for these types of designated resources.
- Natural resources can have beneficial functions that reduce the impacts of natural hazards, such as wetlands and riparian habitat, which help absorb and attenuate floodwaters.

Natural resources are also important to include in benefit-cost analyses for future projects and may be used to leverage additional funding for mitigation projects that also contribute to community goals for protecting sensitive natural resources. Awareness of natural assets can lead to opportunities for meeting multiple objectives. For instance, protecting wetlands areas protects sensitive habitat as well as attenuates and stores floodwaters.

There are many natural resources that are important to Kings County, a detailed description of those resources can be found in the *Resource Conservation Element* of the Kings County General Plan.

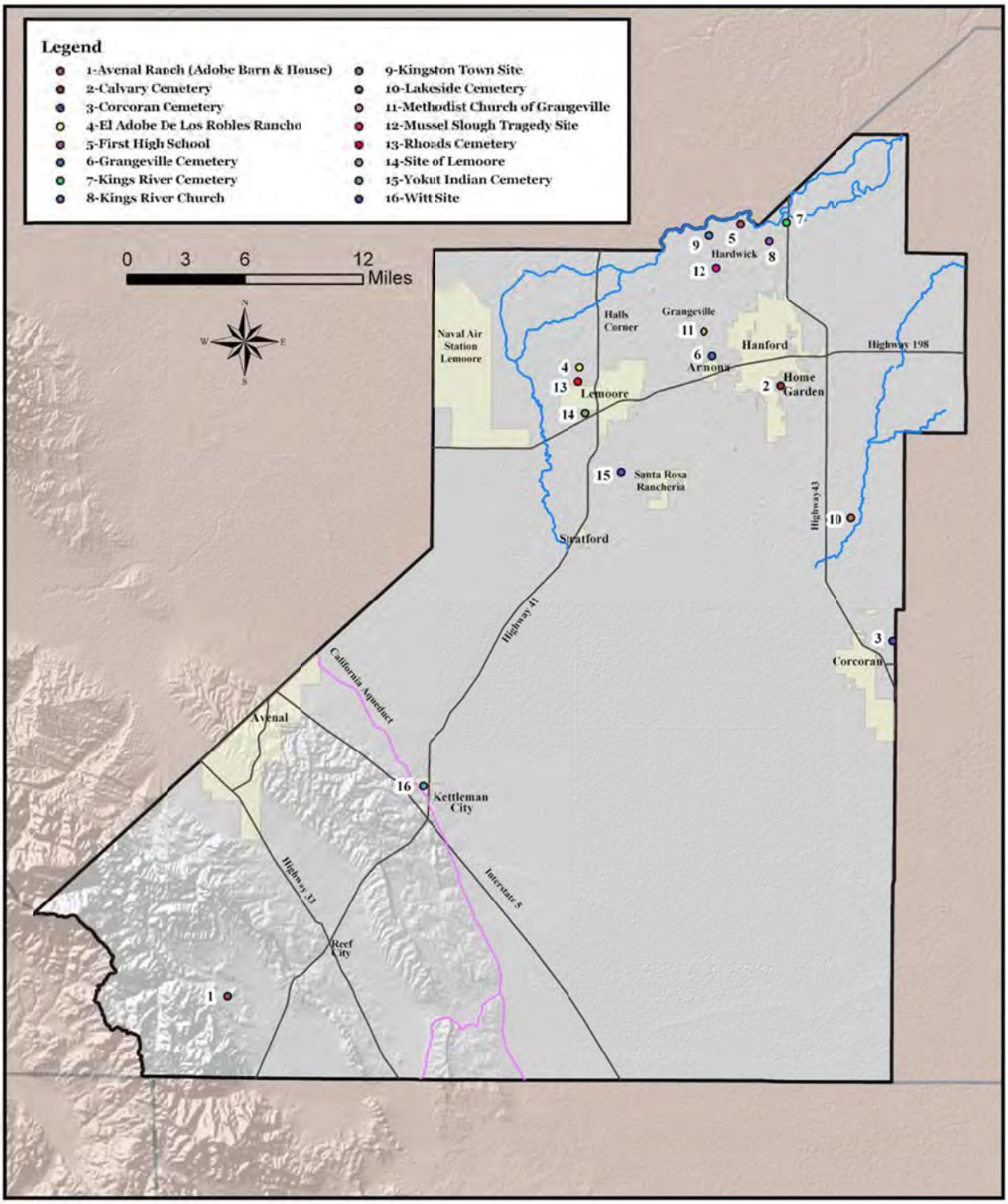
Historical and Cultural Resources
Kings County has a number of historical sites, and is also the home of the Tachi Yokut Tribe

that lived throughout the region and along the Tulare Lake. The lake region contains numerous archaeological artifacts along the Tulare lakeshores margins and a significant archaeological site called the Witt site in southern Kings County (near Dudley Ridge). Numerous other recorded cultural resource sites have been identified in Kings County in the area of Stratford, the area south and west of Lemoore, and in the area west of Alpaugh in southeastern Kings County.

The National Register of Historic Places lists four sites within Kings County, and three additional sites that have been designated as California Historical Landmarks. Sites include a Taoist Temple, County Courthouse, Carnegie Library, and the Witt archaeological site. The three California Historical Landmarks include the Kingston Town Site north of Hardwick, the El Adobe de los Robles Rancho west of Lemoore, and the Mussel Slough Tragedy site south of Hardwick. Thirteen other historic sites of local importance also exist. These include several cemeteries and churches located in Corcoran, Lemoore, Grangeville, and other rural areas in the northern County. Other notable sites include the original site of Lemoore, the Avenal Ranch, Kettleman Hills fossil beds, and First High School on the Kings River (Kings County General Plan, 2010.) The map on the following page shows the Historical Sites in Kings County.

It should be noted that as defined by the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA), any property over 50 years of age is considered a historic resource and is potentially eligible for the National Register. Thus, in the event that the property is to be altered or has been altered, the property must be evaluated under the guidelines set forth by the CEQA and NEPA. Structural mitigation projects, such as earthquake retrofits, are included in this regulation.

Kings County Historical Sites Map



Economic Assets

Economic assets at risk may include major employers or primary economic sectors, such as, agriculture, whose losses or inoperability would have severe impacts on the community and its ability to recover from disaster. After a disaster, economic vitality is the engine that drives recovery. Every community has a specific set of economic drivers, which are important to understand when planning ahead to reduce disaster impacts to the economy. When major employers are unable to return to normal operations, impacts ripple throughout the community. The table below shows the top employers in Kings County as provided by the Kings County Economic Development Corporation, 2012.

Top Employers in Kings County

Employer	Number of Employees	Location
Corcoran State Prisons	3,500	Corcoran
Lemoore Naval Air Station	1,100 civilian	Lemoore
Avenal State Prison	1,300	Avenal
Tachi Palace	1,500	Lemoore
JG Boswell Company	1,200	Corcoran
Kings County	1,293	Hanford
Adventist Health	2,200	Hanford
Leprino Foods	970	Lemoore
Paramount Foods	600	Avenal
Marquez Brothers	325	Hanford
Reef-Sunset Unified School District	306	Avenal

Source: King County Economic Development Corporation, 2012

Agriculture provides 14 percent of Kings County's employment. A leading agricultural county, Kings jumped from #11 agricultural county in the State for 2009 to #9 in 2010. A resurgence in commodity prices sent gross production values from $1.7B in 2010, to $2.2B, a 29 percent increase. Milk remains as Kings County's leading commodity with a value of $799 million, a 44% increase over 2010 milk production values. Cotton and cottonseed, cattle, process tomatoes, and alfalfa follow milk to round out Kings County's five leading commodities. In recent years, the county has seen expanded fruit & nut crops, apiary products and seed crops.

Agricultural losses resulting from natural hazards can have dramatic impacts on the economic health of Kings County. Past losses to agricultural commodities due to extreme weather have occurred at a rate of approximately one event per year since 1997, most often in April and May.

Estimating Potential Losses

The Planning Team ranked the significance of identified hazards for each jurisdiction. Significance is measured in general, qualitative terms and is a summary of the potential impact of the hazard based on the geographical area affected, history of past occurrences,

potential magnitude, probability of the event, and damage and casualty potential. Significance is classified as the following:

High: Widespread potential impact. This ranking carries the highest threat to the general population and/or built environment. Hazards in this category may have already occurred in the past.

Medium: Moderate potential impact. This ranking carries a moderate threat level to the general population and/or built environment. The potential of occurrence may be the same as the high ranking, but the potential damage is more isolated and less costly than a more widespread disaster.

Low: Minimal potential impact. The occurrence and potential cost of damage to life and property is minimal.

The table on the following page summarizes the hazard significance rankings developed by the Planning Team for participating jurisdictions in Kings County. School districts are not included in the table. The planning significance of different hazards depends upon their location in the county.

This section assesses vulnerability to those specific hazards ranked of medium or high significance. The Planning Team identified three hazards within the planning area where specific geographical hazards are defined: earthquake, flooding, and wildfire. Critical facilities and other assets in these areas were assessed and are described below. The vulnerability to other medium to high significance hazards that do not have specific mapped areas, such as drought, extreme heat, freeze, and fog, are discussed in more general terms at the end of this section.

It is also important to be aware that hazard events that happen outside of the county boundaries also can have direct and indirect impacts to Kings County. For instance, dam failures and wildfires in watersheds outside the county that drain into it can result in flooding and other impacts related to watershed health. An earthquake or flood as far away as the Sacramento Delta Region could disrupt water supply to the county from the California Aqueduct. Power supply also could be interrupted by earthquake and wildfire hazards outside of the county.

Significance of Hazard by Jurisdiction

Hazard	Kings County*	Avenal	Corcoran	Hanford	Lemoore
Dam Failure	Low	Low	Low	Low	Medium
Drought	High	Medium	High	High	Medium
Earthquake	High	High	High	High	High
Extreme Heat	Medium	Medium	Medium	Medium	Medium
Flood	Medium	Medium	High	Low	Low
Fog	Medium	Medium	Medium	Medium	Medium
Freeze	Medium	Low	Low	Medium	Medium
Landslide	Low	Low-Medium	Low	Low	Low
Tornado	Low	Low	Low	Low	Low
Wildfire	Medium	Low	Low	Low	Low

Source: Kings County Planning Team
*Unincorporated areas.

Earthquake

Vulnerabilities

- Pre-1973 Homes due to older Earthquake Standards
- Historic Buildings
- Older bridges, overpasses and elevated roadways
- Water, Gas and Sewer Lines
- Power Distribution Systems
- Critical Facilities
- People with Disabilities, the Elderly and Access and Functional Needs
- Agricultural Buildings
- Livestock
- Canals and Waterways

Earthquake vulnerability is based primarily upon population and the built environment. When the M 7.9 Fort Tejon earthquake occurred along the San Andreas Fault near Kings County in 1857, California was sparsely populated, especially in the regions of strongest shaking. The California State Multi-Hazard Mitigation Plan (2010) predicts a repeat of the 1857 earthquake would cause approximately $150 million in property damage.

To mitigate this hazard, building codes in California have been steadily improved over the past 80 years as understanding of seismic shaking has improved. Current California building codes include provisions for considering the potential shaking from earthquakes, including stronger shaking near faults and amplification by soft soils. The building code has been the

main mitigation tool for seismic shaking in most buildings, although hospitals, schools, and other critical facilities are subject to additional mitigation measures (Cal EMA HMP 2010).

The state has an unreinforced masonry program, which requires seismic retrofits or building removal in Zone IV. Unreinforced masonry buildings are generally brick buildings constructed prior to 1933, predating modern earthquake-resistant design. The brick is not strengthened with embedded steel bars and is therefore called unreinforced. There are four seismic zones in the United States ranging from I to IV; the higher the number, the higher the earthquake danger. All of California lies within Seismic Zone III or IV. Stronger construction standards for buildings in Zones III and IV have been adopted in the International Building Code. Most of Kings County is in Zone III except for the southwestern part, which is in Zone IV.

Estimating Potential Losses

FEMA's software program for estimating potential losses from disasters, HAZUS, was used to estimate potential losses in Kings County from three earthquake scenarios. The following version MH 2.1 SP1 of HAZUS was used for development of the earthquake scenarios. The first scenario was an annualized loss scenario representing long-term average losses based on overall local seismic hazard using a default M 5.0, 6.0 and 7.0 assumptions. The table on the following page summarizes the results of the three scenarios.

The Planning Team also identified the potential impacts of a major earthquake in Los Angeles or San Francisco Bay Area on the Central Valley and Kings County. Displaced people from these areas may come to the county and require sheltering, medical care, and other local resources.

HAZUS Potential Dollar Losses to Vulnerable Structures

Type of Impact	Annualized Loss Scenario M5.0	Annualized Loss Scenario M6.0	Annualized Loss Scenario M7.0
Total Buildings Damaged	**1,364** at least moderately damaged (4% of total in region) **15** damaged beyond repair	**1,364** at least moderately damaged (4% of total in region) **15** damaged beyond repair	**1,364** at least moderately damaged (4% of total in region) **15** damaged beyond repair
Residential Buildings Damaged (single family and other residential)	Slight: **4,960** Moderate: **1,068** Extensive: **124** Complete: **13**	Slight: **4,960** Moderate: **1,068** Extensive: **125** Complete: **14**	Slight: **4,092** Moderate: **942** Extensive: **190** Complete: **59**
Building-Related Losses	**$102.9** million	**$102.9** million	**$102.9** million
Total Economic Losses (building and lifeline losses)	**$118.65** million	**$118.74** million	**$118.74** million
Casualties (based on 2:00am occurrence)	Without requiring hospitalization: **31** Requiring hospitalization: **3** Life threatening: **0** Fatalities: **0**	Without requiring hospitalization: **31** Requiring hospitalization: **4** Life threatening: **0** Fatalities: **0**	Without requiring hospitalization: **31** Requiring hospitalization: **4** Life threatening: **0** Fatalities: **0**
Casualties (based on 5:00pm occurrence)	Without requiring hospitalization: **21** Requiring hospitalization: **3** Life threatening: **0** Fatalities: **0**	Without requiring hospitalization: **21** Requiring hospitalization: **3** Life threatening: **0** Fatalities: **1**	Without requiring hospitalization: **21** Requiring hospitalization: **3** Life threatening: **0** Fatalities: **1**
Damage to Transportation Systems	**0** damage	**0** damage	**0** damage
Displaced Households	**38**	**38**	**38**
Shelter Requirements	**55** people out of 129,461 in region	**55** people out of 129,461 in region	**55** people out of 129,461 in region

Source: HAZUS 2012

Summary of Potential Impacts
According to the HAZUS model, Kings County is susceptible to serious earthquake losses in the millions of dollars. The overall impact of earthquakes to Kings County includes:

- Potential for injury and loss of life;
- Widespread structural damage, particularly in manufactured housing;
- Loss of water, power, roads, phones, and transportation, which can be particularly dangerous for those with certain medical conditions;
- Power loss complicating response and recovery efforts;
- Business interruption losses;
- Agricultural impacts such as field disturbances and damage to irrigation systems; and
- Damage to oil and gas facilities and pipelines.

The HAZUS earthquake model applies to census tract level data and does not allow for the quantification of risk by jurisdiction. Based on the earthquake shaking map and fault locations in the hazard profiles section, Avenal and the unincorporated community of Kettleman Hills are likely to experience stronger ground shaking than the rest of the county.

Older construction and unreinforced masonry buildings are more vulnerable to shaking during earthquakes. Historic buildings can be more susceptible because they have weakened with age and were built before the use of building codes. Most unreinforced masonry buildings in Kings County are in Hanford, where it is estimated there are 154. HAZUS predicts that building-related losses will primarily occur in manufactured housing in Kings County.

The Kettleman Hills Hazardous Waste Facility is located near several small faults in the Kettleman Hills. Due to the high classification of hazardous waste stored there and the past problems with landslide and leakage, there is some environmental risk in an earthquake event. The nearest community is Kettleman Hills, four miles away.

The California Aqueduct runs through western Kings County, where seismic hazards are high. Numerous natural gas and oil pipelines, telephone lines, and fiber optic cables also follow the Interstate 5 corridor in western Kings County. These are vulnerable to damage from seismic offset. Water wells and oil wells also could be damaged by subsurface slumping.

Wildfire

Vulnerabilities
- Homes in the Wildland/Urban Interface
- Water, Gas and Sewer Lines
- Power Distribution Systems
- Critical Facilities
- People with Disabilities, the Elderly and Access and Functional Needs
- Agricultural Buildings
- Livestock

- Crops

Vulnerability to wildfire is predominantly associated with wildland-urban interface (WUI) areas. The WUI is a general term that applies to development interspersed or adjacent to forests and wildlands. WUI areas are a major focus of the California Department of Forestry and Fire Protection's (Cal Fire) fire management strategy.

In Kings County, WUI areas occur primarily in the southwestern part of the county near Avenal. Much of the area with the highest fire hazard is isolated with few urban settlements and vulnerability is considered low in the health and safety element of the Kings County General Plan. There is also limited exposure to wildfire in the grass lands. When considering the planning area as a whole, limited fuel loading, along with the geographical and topographical features of the area, limit the potential for fires resulting in loss of life and property. However, 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.

Cal Fire generated a list of communities at risk for wildfire as required by the National Fire Plan. The National Fire Plan is a cooperative, long-term effort between various government agency partners with the intent of actively responding to severe wildland fires and their impacts to communities while ensuring sufficient firefighting capacity for the future. Three main factors were used to determine wildfire threat in the wildland-urban interface areas of California. These include ranking fuel hazards, assessing the probability of wildfire, and defining areas of suitable housing density that could create WUI fire protection strategy situations. Avenal is the only Community at Risk in Kings County listed in the Federal Register. Avenal is in a Local Responsibility Area, protected by the Kings County Fire Department. Most of the area to the west of Highway 33 is Cal Fire State Responsibility Area for fire protection.

Kings County is in Cal Fire's Fresno-Kings Unit. Most fire starts in local responsibility areas in the Fresno-Kings Unit are related to motor vehicles, equipment use, and arson (Fresno-Kings Unit Pre-Fire Management Plan 2005).

Estimating Potential Losses
In Avenal there are approximately 35 structures with an approximately value of $637,000 and in unincorporated areas in the western part of the county are there 284 structures with an approximately value of $309,000 located in very high fire threat areas (Kings County LHMP 2007).

Summary of Potential Impacts
The overall potential impacts from wildfire include:

- Potential for injury and loss of life;
- Commercial and residential structural damage;
- Impacts to water quality and watershed health;
- Impacts to natural resource habitats and other resources, such as agriculture,
- Loss of water, power, roads, phones, and transportation;

- Public Health and Air Quality
- Significant economic impacts (jobs, sales, tax revenue) with the loss of commercial structures; and
- Decline in commercial and residential property values.

Large, past burn areas are located in high fire threat areas mapped along the west side of Interstate 5. There are no other known critical facilities in very high to extreme fire threat areas. Although there are not significant timber resources in Kings County, wildfires can destroy crops affecting the economy.

Drought

Vulnerability

- Water supply
- Natural Habitat
- Livestock and Crops
- Open space and greenbelts
- Natural Resources

All of Kings County is vulnerable to drought. Drought is one of the few hazards with the potential to impact all the citizens of the county through water restrictions, economic losses, and increased energy costs. The urbanized areas of the county and the agriculture industry are most likely to experience hardships associated with reduced water supply.

Agriculture in the San Joaquin Valley relies on artificial irrigation using mostly imported water and/or groundwater. Local droughts are expected and accommodated for; however, a prolonged statewide drought could exceed local capabilities to handle reductions of imported surface water supplies and potentially lead to reductions in distribution from local water storage districts.

The costs of drought are difficult to quantify because the impacts affect so many different sectors including wildlife and natural resources, business and industry, tourism and recreation, agriculture, and individual households. Agriculture often suffers the most financial losses from drought and is the major component of the Kings County economy. According to the Kings County Economic Development Corporation, the gross value of all agricultural crops and products produced during 2011 in Kings County was $2,219,529,000. This represents an increase of $501,558,000 (29.2%) from the 2010 value and is a record high figure for the county.

Summary of Potential Impacts
The overall potential impacts from drought include:

- Increased potential for heat injury and loss of life
- Impacts to water quality and watershed health
- Impacts to natural resource habitats and other resources, such as agriculture
- Loss of water for irrigation
- Public Health and Air Quality

- Significant economic impacts (jobs, sales, tax revenue)
- Decline in commercial and residential property values

Extreme Heat

Vulnerability

- Agriculture
- People with disabilities and the elderly; People with Access and Functional Needs
- Water supply
- Natural Habitat
- Livestock and Crops
- Open space and greenbelts
- Natural Resources

The agricultural industry is most at risk to extreme temperatures. Hot and cold temperature extremes damage crops, affecting the economy and potentially resulting in lost farming jobs. Field workers are susceptible to heat exhaustion and heat stroke. Elderly residents who may live alone and are limited in their mobility are also vulnerable during heat waves.

Problems with power loss and water distribution also occur during periods of extreme heat. Power outages and rolling brownouts can result when high temperatures increase air conditioner use. Power outages have prevented water pumping stations from operating.

Summary of Potential Impacts
The overall potential impacts from drought include:

- Increased potential for heat injury and loss of life
- Impacts to water quality and watershed health
- Impacts to natural resource habitats and other resources, such as agriculture
- Loss of water for irrigation
- Public Health and Air Quality
- Significant economic impacts (jobs, sales, tax revenue)
- Decline in commercial and residential property values

Flood

Vulnerabilities

- Structures in low lying areas and floodplains
- Historic Buildings
- Roadways and older Bridges
- Levees and Levee Roads
- Water, Gas and Sewer Lines
- Power Distribution Systems
- Critical Facilities

- People with Disabilities, the Elderly and Access and Functional Needs
- Agricultural Buildings
- Livestock
- Canals and Waterways
- Natural Resources and species

Despite the construction of massive and relatively effective flood control projects, California remains vulnerable to flooding. A steady rise in population and accompanying development contribute to increased flood risks throughout the state. According to the National Flood Insurance Program (NFIP), all four municipalities within Kings County have mapped flood hazard areas. The table on the following page provides further information on their participation in the NFIP.

Hazus estimates that there are 36,717 buildings in the region, which have an aggregate total replacement value of 6,918 million (2006 dollars). The table below presents the relative distribution of the value with respect to the general occupancies by Study Region.

Kings County Building Exposure by Type

Table 1
Building Exposure by Occupancy Type for the Study Region

Occupancy	Exposure ($1000)	Percent of Total
Residential	5,671,492	82.0%
Commercial	713,641	10.3%
Industrial	164,547	2.4%
Agricultural	110,662	1.6%
Religion	116,159	1.7%
Government	31,974	0.5%
Education	109,788	1.6%
Total	**6,918,263**	**100.00%**

Source: HAZUS 2012

Summary of Potential Impacts

Most of the flooding in Kings County can be characterized as shallow, sheet flow events. This type of flooding often results in property damage, road washouts, and transportation disruptions. Other general impacts of these events may include the following:

- Potential for injury and loss of life
- Commercial and residential structural damage
- Erosion of streambeds, roadways and hillsides
- Loss of water, power, roads, phones, and transportation, which can be particularly dangerous for those with certain medical conditions
- Hazardous Materials Contamination of large areas due to Agricultural Chemicals, pesticides and petroleum products
- Economic impacts (jobs, sales, tax revenue) due to loss of commercial structures

- Decline in commercial and residential property values

Most of the urban areas in Kings County are not located in mapped floodplain areas. Flood hazards exist primarily in the center of the county in the Tulare Lake Basin and along Cross Creek, the Kings River and the North and Clarks Forks of the Kings River, and in the valley between the Kettleman Hills and the Kreyenhagen Hills. Both Avenal and Lemoore have little to no exposure in the 100-year floodplain, though they have significant vulnerability to a 500-year flood. Corcoran has some limited exposure along its southwestern city boundary. Hanford has few structures at risk, but higher monetary value at risk. Near unincorporated communities, flood hazards are mapped to the east of Kettleman City and to the northwest of Stratford. The Santa Rosa Rancheria has some urban flooding mapped in the southwest corner, though it does not appear to affect the casino or other structures.

Few critical facilities are located in the 100-year floodplain. The Central California Soaring Club Airport and Highway 33 in Avenal do occur in this hazard area. Much of Avenal lies in the 500-year floodplain, which is primarily affected by sheet flow flooding.

No cultural or historical sites are known in flood areas based upon available data. Risk analysis of natural resources was not possible due to data limitations. Natural areas within the floodplain often benefit from periodic flooding as a naturally recurring process. In addition, natural areas help mitigate flood impacts by absorbing flood waters.

In terms of economic assets, most dairy facilities are not located in flood hazard areas, except for a few in the Cross Creek floodplain in the northeastern part of the county. The Paramount Pomegranate Orchards are located in a mapped flood hazard area near the southern border of the county.

Freeze
Vulnerabilities

- People
- Agriculture – Crop Damage and Livestock
- Water Distribution Systems
- Power Failure

Prolonged freezing temperatures can damage or destroy crops, affecting the economy and agricultural jobs in Kings County. 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.

Summary of Potential Impacts
The overall potential impacts from drought include:

- Increased potential for injury and loss of life
- Significant economic impacts (jobs, sales, tax revenue)
- Crop Damage

Fog

Vulnerability

- Air, Rail and Ground Transportation Routes
- People in Transit

Fog contributes to transportation accidents and is a significant life safety hazard. These accidents can cause multiple injuries and deaths and could have serious implications for human health and the environment if a hazardous or nuclear waste shipment were involved. Other disruptions from fog include delayed emergency response vehicles and school closures. Highways and busy intersections during traffic rush hours are vulnerable areas during severe fog events.

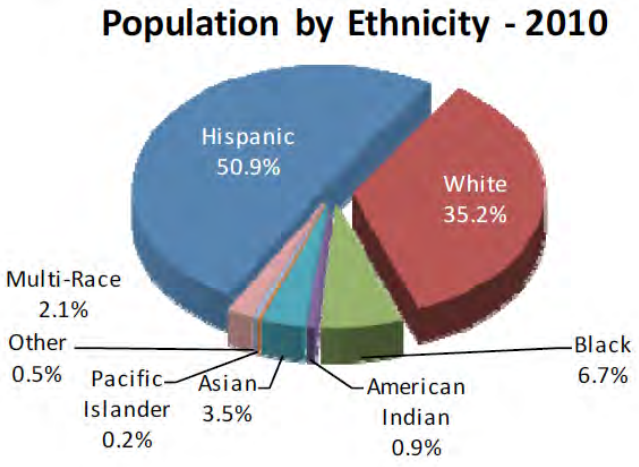
Summary of Potential Impacts

- Loss of Life and Injury
- Decreased Economic Activity
- School Closures
- Road Closures

Development Trends

As part of the planning process, the Planning Team looked at changes in growth and development and examined these changes in the context of hazard-prone areas and how the changes in growth and development affect loss estimates and vulnerability. The Central San Joaquin Valley is currently experiencing growth in food processing, warehousing and distribution, education, and health care. Though population growth is temporarily stable, the Valley is seeing a trend of nonfarm job growth. Kings County's population is projected to reach 281,866 by the year 2050.

Upward trends in population growth and development in Kings County increase vulnerability to hazards, including earthquakes, flooding, wildfire, and drought. Modern, well-constructed buildings built to code are more resistant to earthquake shaking. However, new buildings can be severely damaged if built upon areas susceptible to soil liquefaction. The risk of flooding in future development should be minimized by the floodplain management programs of the county and its municipalities, if properly enforced. Vulnerability to wildfire will increase with more development in WUI areas in the western part of the county and will increase the fire protection challenges in the area. Lastly, as the population grows, so do the water needs for household, commercial, industrial, recreational, and agricultural uses. Vulnerability to drought will increase with these growing water needs.



B.4. Repetitive Loss and Severe Repetitive Loss Properties

§201.6(c)(2)(ii): [The risk assessment shall include a] description of the jurisdiction's vulnerability to the hazards described in paragraph (c)(2)(i) of this section. This description shall include an overall

summary of each hazard and its impact on the community. All plans approved after October 1, 2008 must also address NFIP insured structures that have been repetitively damaged by floods.

According to the Kings County Planning Agency there are no repetitive loss properties in Kings County. The NFIP defines a repetitive loss structure as “any building with two or more flood losses greater than $1,000 in any 10-year period since 1978." Although this seems an encouraging statistic, it actually may reflect a lack of flood insurance policies in areas that have repetitive floods.

Element C: Mitigation Strategy

Requirement §201.6(c)(3): [The plan shall include the following:] A mitigation strategy that provides the jurisdiction's blueprint for reducing the potential losses identified in the risk assessment, based on existing authorities, policies, programs, and resources, and its ability to expand on and improve these existing tools.

Specific mitigation objectives and action items were developed for Kings County in conjunction with the public meetings held in the locations, as cited in the documentation of the Planning Process as described in Element A. The list of action items identifies mitigation projects and includes a project ranking based upon time horizon, cost, and risk, benefit and input from local stakeholders. The action items were developed to provide public policy makers with a list of potential implementation as mitigation resources; time, equipment and funding become available for the selected projects.

Items completed from the 2007 Plan

On September 27, 2012 the Planning Team met and reviewed the progress on the mitigation items created for the 2007 Plan. Those items not completed were largely a result of a lack of funding, limited growth in property tax, fixed personnel costs, a slow recovery from the recession and diminishing state assistance to counties have all contributed to this lack of local funding for mitigation projects. Despite those reasons, the Kings County Operational Area has been working on many of these projects creatively and collectively and has made considerable progress on the 2007 project list.

Element C.1 Existing Authorities, Policies, Programs and Resources

Requirement §201.6(c)(3): [The plan shall include the following:] A mitigation strategy that provides the jurisdiction's blueprint for reducing the potential losses identified in the risk assessment, based on existing authorities, policies, programs, and resources, and its ability to expand on and improve these existing tools.

Kings County and the Cities of Avenal, Corcoran, Hanford and Lemoore all have an Emergency Operations Plan, a General Plan, which includes a Health and Safety Element, an Emergency Services Ordinance that clearly defines roles and responsibilities in accordance with state and federal guidelines. The County CAO/City Managers serve as the Director of Emergency Services by law and ordinance and the Board of Supervisors/City Councils serve as the administering agency and the promulgation authority for all plans, policies and procedures within Kings County and the Cities previously mentioned. The county recognizes the 2010 Hazard Mitigation Plan of the State of California, the California Emergency Services Act, and the appropriate Federal Regulations including 44 CFR 201. Kings County is subject to the State of California Uniformed Building Code (UBC), which dictates standards on all current and future construction within Kings County.

Element C.2 Participation in the NFIP

§201.6(c)(3)(ii): [The hazard mitigation strategy shall include a] section that identifies and analyzes a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard, with particular emphasis on new and existing buildings and infrastructure. All plans approved by FEMA after October 1, 2008, must also address the jurisdiction's participation in the NFIP, and continued compliance with NFIP requirements, as appropriate.

The county has worked with FEMA in three broad areas of the NFIP such as actively working with FEMA to revise floodplain identification, working with local governments to manage development in the floodplain and as part of the Emergency Management and NFIP public education process and the encouragement of residents to purchase flood insurance. Kings County OEM has assisted in public education programs to encourage all residents of the basin area to purchase flood insurance under the NFIP program as part of their personal preparedness programs.

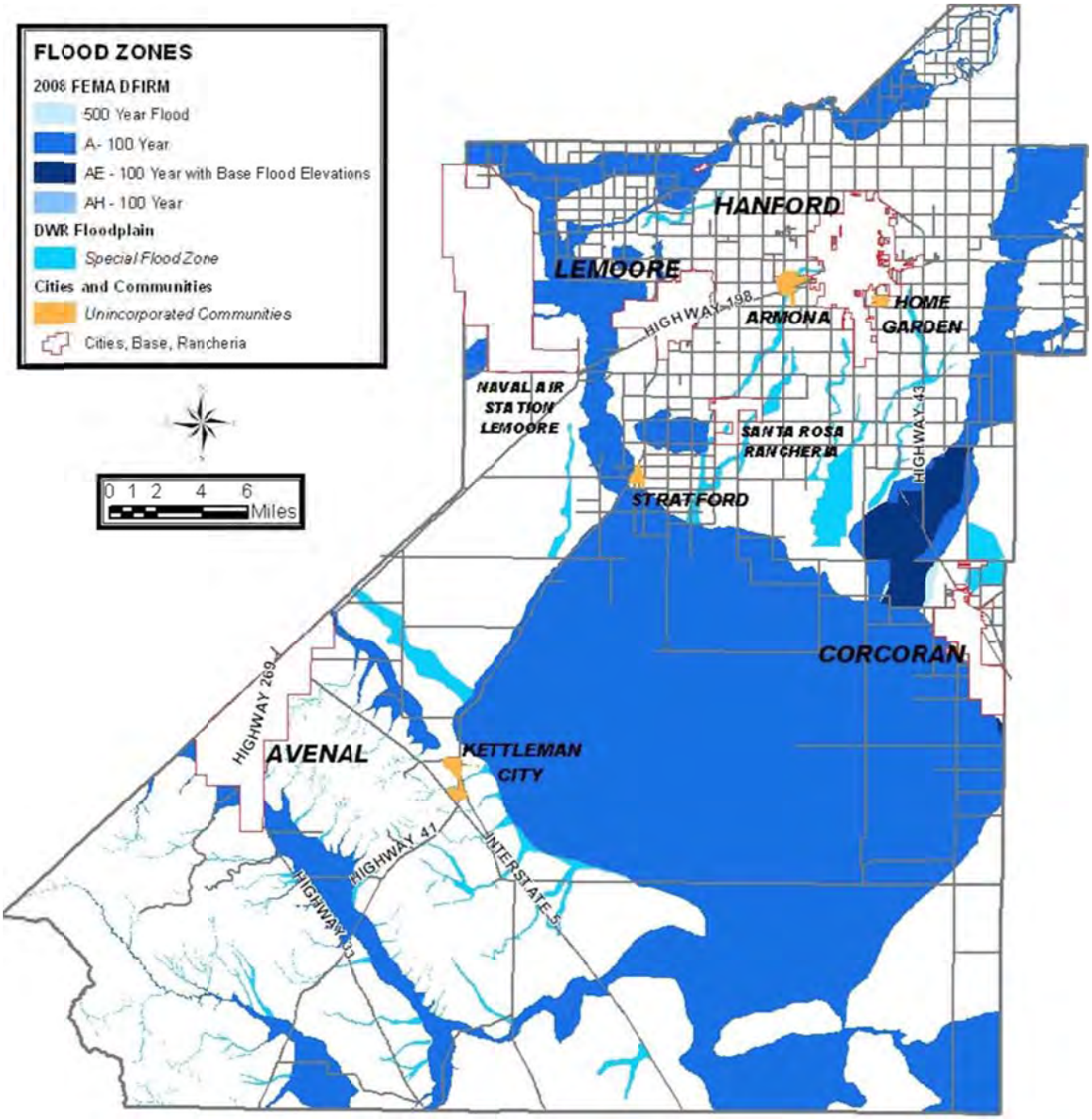
In 2009, FEMA completed their Digital Flood Insurance Rate Map (DFIRM) conversion and updated a number of flood zone areas using 2005 levee certification criteria. In 2007, the California Department of Water Resources completed their Awareness Floodplain Mapping of Kings County to identify all pertinent 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. The map on the following page 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.

Community Participation in the NFIP in Kings County

Jurisdiction	Date Joined	Current Effective Map Date
Avenal	04/05/1989	06/16/2009
Corcoran	11/28/1997	Adopted Kings County FIRM 06/16/2009
Hanford	03/18/1987	Adopted Kings County FIRM 06/16/2009
Lemoore	04/03/1987	Adopted Kings County FIRM 06/16/2009
Kings County	08/04/1988	06/16/2009

Source: NFIP Community Status Book, 2012



FEMA's DFIRM (2009) and California DWR's Awareness Floodplain Maps (2007)

Kings County together with the Cities of Avenal, Corcoran, Hanford and Lemoore will continue to comply with the NFIP requirements and maintain current adopted and enforced floodplain management standards. The jurisdictions will continue regulation of new construction in special flood hazard areas. This has been accomplished through the planning and permit process and the refining of floodplain mapping with FEMA. This partnership with FEMA has resulted in better identification of floodplain areas and floodplain management activities.

Element C.3 Mitigation Goals

§201.6(c)(3)(i) [The hazard mitigation strategy shall include a] description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards.

The Planning Team developed goals and objectives to provide direction for reducing hazard-related losses in Kings County. These were based upon the results of the risk assessment and a review of community goals from other state and local plans. The Planning Team reviewed goals from the following plans to ensure their mitigation strategy was integrated with existing plans and policies:

- State of California Multi-Hazard Mitigation Plan, 2010
- California Fire Plan, 2010
- Fresno-Kings Unit County Pre-Fire Management Plan, 2005
- Kings County Emergency Operations Plan, 2008
- Kings County General Plan, 2010

Through a brainstorming process at their third meeting, the Planning Team identified a variety of possible goals and then came to a consensus on three main sets of goals and objectives. Following the development of goals, the Planning Team identified specific objectives to achieve each goal. Goals and objectives are listed below, but are not prioritized:

Goal 1 Reduce impacts of natural hazards to life, property, and the environment

- Promote education and awareness about natural hazards risk, mitigation, and preparedness to citizens, public agencies, elected officials, non-profit organizations, and businesses
- Ensure protection and enhancement of key emergency access routes
- Protect critical facilities and infrastructure to minimize loss of critical services
- Minimize growth and development in hazard areas
- Improve enforcement of existing standards and regulations

Goal 2 Minimize impacts of natural disasters to agriculture and the economies of communities

- Encourage water conservation measures among urban, rural, and agricultural users
- Increase water storage to mitigate flooding and drought
- Develop plans for post-disaster recovery
- Strengthen disaster resistance and resiliency of major employers

Goal 3 Implement identified mitigation activities

- Promote hazard mitigation as integrated policy among communities in the county and with the region and state

- Increase communication regarding mitigation among communities in the county.
- Seek funding sources and partners for future mitigation activities
- Improve organizational capabilities to address health and safety issues in mitigation and response

Element C.4 Mitigation Actions and Projects

§201.6(c)(3)(ii): [The hazard mitigation strategy shall include a] section that identifies and analyzes a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard, with particular emphasis on new and existing buildings and infrastructure. All plans approved by FEMA after October 1, 2008, must also address the jurisdiction's participation in the NFIP, and continued compliance with NFIP requirements, as appropriate.

§201.6(c)(3)(iv): For multi-jurisdictional plans, there must be identifiable action items specific to the jurisdiction requesting FEMA approval or credit of the plan.

The Planning Team developed 26 mitigation actions, which are listed below. At their meeting, the Planning Team came to consensus on the person and department responsible for completing a mitigation action worksheet for the county/participating jurisdictions for each identified mitigation action. The worksheet includes information on the background issues, possible alternatives, responsible office, cost estimate, benefits, potential funding, and ideas for implementation for each action.

Full descriptions of each mitigation action for this 2012 LHMP are provided in each jurisdictional annex and a summary is provided on the following page.

Summary of 2012 Mitigation Actions

Mitigation Action	Links to Goals	Hazards Addressed	Kings County	Avenal	Corcoran	Hanford	Lemoore	Tachi Yokut Tribe	Status
Housing Rehabilitation Program	1,2	Earthquake		X					Cont'd
Emergency Power System	1,3	Drought, EQ, Extreme Heat, Flood, Fog, Freeze, Wildfire		X				X	New
Vulnerability of Water Distribution System	1,2	Earthquake		X					Cont'd
Loss Reduction Program for URM Buildings	1	Earthquake		X					Cont'd
Veterans' Memorial Building	1	Drought, EQ, Extreme Heat, Flood, Fog, Freeze, Wildfire			X				Cont'd
Impact of the High Speed Rail Project	1,2,3	Drought, EQ, Extreme Heat, Flood, Fog, Freeze, Wildfire	X		X	X	X		New
Emergency Power System for shelter site	1,3	Drought, EQ, Extreme Heat, Flood, Fog, Freeze, Wildfire			X			X	New
New Public Safety Building	1,3	Drought, EQ, Extreme Heat, Flood, Fog, Freeze, Wildfire			X				New
Public Education Program	1,3	Drought, EQ, Extreme Heat, Flood, Fog, Freeze,	X			X	X		Cont'd

Mitigation Action	Links to Goals	Hazards Addressed	Kings County	Avenal	Corcoran	Hanford	Lemoore	Tachi Yokut Tribe	Status
		Wildfire							
Emergency Power Switching System for Primary Care Clinics	1,3	Drought, EQ, Extreme Heat, Flood, Fog, Freeze, Wildfire	X						New
Hospitals HVAC	1,3	Drought, EQ, Extreme Heat, Flood, Fog, Freeze, Wildfire	X						New
Water Recharge Basin Partnership Program	1,2,3	Drought, EQ, Extreme Heat, Flood, Fog, Freeze, Wildfire	X						Revised
Community Alert and Warning	1,3	Drought, EQ, Extreme Heat, Flood, Fog, Freeze, Wildfire	X						New
Transportable Shelter Caches for Displaced Populations	1,3	Drought, EQ, Extreme Heat, Flood, Fog, Freeze, Wildfire	X						New
New County EOC Assessment	1,3	Drought, EQ, Extreme Heat, Flood, Fog, Freeze, Wildfire	X						New
Inter-jurisdictional GIS Program	1,2,3	Drought, EQ, Extreme Heat, Flood, Fog, Freeze, Wildfire	X						Revised
Kings County Area Disaster Council	3	Drought, EQ,	X						Cont'd

Mitigation Action	Links to Goals	Hazards Addressed	Kings County	Avenal	Corcoran	Hanford	Lemoore	Tachi Yokut Tribe	Status
		Extreme Heat, Flood, Fog, Freeze, Wildfire							
Livestock Disposal Plan	1,2	Extreme Heat	X						Cont'd
Disaster Evacuation Routes	1,2	Drought, EQ, Extreme Heat, Flood, Fog, Freeze, Wildfire	X						Cont'd
Traffic Safety Fog Events	1	Fog	X						Cont'd

Element C.5 Mitigation Strategy Action Plan

§201.6(c)(3)(iii) [The hazard mitigation strategy shall include an] action plan, describing how the action identified in paragraph (c)(3)(ii) of this section will be prioritized, implemented, and administered by the local jurisdiction. Prioritization shall include a special emphasis on the extent to which benefits are maximized according to a cost benefit review of the proposed projects and their associated costs. §201.6(c)(3)(iv) For multi-jurisdictional plans, there must be identifiable action items specific to the jurisdiction requesting FEMA approval or credit of the plan.

The Planning Team analyzed a list of potential structural and nonstructural mitigation alternatives identified based upon the risk assessment, existing capabilities, and identified goals and objectives. Each committee member was provided with the STAPLEE prioritization criteria recommended by FEMA. STAPLEE stands for: social, technical, administrative, political, legal, economic, and environmental, which are the factors that should be considered when assessing mitigation measures. Through a collaborative group process, the Planning Team used STAPLEE to identify the specific mitigation actions from among the alternatives that are most likely to be implemented and effective.

This process of identification and analysis of mitigation alternatives allowed the Planning Team to come to consensus and to prioritize recommended mitigation actions. The Disaster Mitigation Act regulations state that benefit-cost review is the primary method by which mitigation projects should be prioritized. In the state ranking, benefit cost review is one of ten criteria, and although the overall priority of the criteria is not stated, benefit-cost review is listed last. Recognizing the federal regulatory requirement to prioritize by benefit-cost and the need for any publicly funded project to be cost-effective, the Planning Team decided to pursue implementation according to when and where damages occur, available funding, political will, jurisdictional priority, and priorities identified in the California State Hazard Mitigation Plan. Cost effectiveness will be considered in additional detail when seeking FEMA mitigation grant funding for eligible projects identified in this plan.

Element C.6 Project Implementation

§201.6(c)(4)(ii): [The plan shall include a] process by which local governments incorporate the requirements of the mitigation plan into other planning mechanisms such as comprehensive or capital improvements, when appropriate.

The Kings County Office of Emergency Management will be the central coordination point for maintaining this plan and will serve as a lead staff for grant project applications on the countywide projects selected for application under the PDM grant program. Additionally, each jurisdiction applying for grant funds on their own will serve as lead staff for project implementation with assistance from the county and participating Planning Team members as requested.

An important implementation mechanism that is highly effective and low-cost is incorporation of the hazard mitigation plan recommendations and their underlying principles into other county and city plans and mechanisms. Where possible, plan participants will use existing plans and/or programs to implement hazard mitigation actions. Mitigation is most successful when it is incorporated into the day-to-day functions and priorities of government and development. As described in this plan's

capability assessment, the County and participating jurisdictions (Avenal, Corcoran, Hanford and Lemoore) already implement policies and programs to reduce losses to life and property from hazards. This plan builds upon the momentum developed through previous and related planning efforts and mitigation programs and recommends implementing actions, where possible, through these other program mechanisms. These existing mechanisms include:

- County and Cities (Avenal, Corcoran, Hanford and Lemoore) General and Master plans
- County and Cities (Avenal, Corcoran, Hanford and Lemoore) Emergency Operations plans
- County and Cities (Avenal, Corcoran, Hanford and Lemoore) ordinances
- County and Cities (Avenal, Corcoran, Hanford and Lemoore) Flood/storm water management/master plans
- Community Wildfire Protection plans
- County and Cities (Avenal, Corcoran, Hanford and Lemoore) Capital improvement plans and budgets
- County and Cities (Avenal, Corcoran, Hanford and Lemoore) Other plans and policies outlined in the capability assessments in the jurisdictional annexes
- County and Cities (Avenal, Corcoran, Hanford and Lemoore) Other plans, regulations, and practices with a mitigation focus

Planning Team members involved in these other planning mechanisms will be responsible for integrating the findings and recommendations of this plan with these other plans, programs, etc., as appropriate. Implementation and incorporation into existing planning mechanisms will be done through the routine actions of the following process:

- Monitoring other County and City (Avenal, Corcoran, Hanford and Lemoore) planning/program agendas
- Attending other County and City (Avenal, Corcoran, Hanford and Lemoore) planning/program meetings
- Participating in other County and City (Avenal, Corcoran, Hanford and Lemoore) planning processes
- Monitoring County and City (Avenal, Corcoran, Hanford and Lemoore) budget meetings for other community program opportunities
- County and City (Avenal, Corcoran, Hanford and Lemoore) annual Hazard Mitigation Plan update meeting

The successful implementation of this mitigation strategy will require constant and vigilant review of existing plans and programs for coordination and multi-objective opportunities that promote a safe, sustainable community. A few examples of incorporation of the Local Hazard Mitigation Plan into existing planning mechanisms include:

- As recommended by Assembly Bill 2140, the County and Cities (Avenal, Corcoran, Hanford and Lemoore) should adopt (by reference or incorporation) this LHMP into the Safety Element of their General Plans. Evidence of adoption (by formal, certified resolution) shall be provided to Cal EMA and FEMA. The following

jurisdictions used the approved 2007 LHMP and integrated it into their General Plans:

- Kings County
- City of Corcoran

The Cities of Avenal, Hanford and Lemoore did not integrate the 2007 LHMP into their General Plans due to staffing constraints and lack of understanding of the integration effort and continuity in the plan update process.

Following the formal approval of this 2012 LHMP the Kings County Office of Emergency Management will work with the Cities of Avenal, Hanford and Lemoore to integrate the elements of this plan into each of the Cities General Plans through formal integration such as a resolution and/or through the General Plan update process for each of the Cities.

- Using the risk assessment information to update the hazards section in the County and City (Avenal, Corcoran, Hanford and Lemoore) 2008 Emergency Operations Plans, the 2007 LHMP planning process occurred around the same timeframe as the Emergency Operations Plan Development for the County and the Cities of Avenal, Corcoran, Hanford and Lemoore. The risk assessment information was used as part of the Hazards Section of the 2008 Emergency Operations Plans and each plan calls out the use of the LHMP specifically. These 2008 Emergency Operations Plans are currently being updated and will use this 2012 LHMP as a foundation for the revised Hazards Section in the 2015 Emergency Operations Plans for the following jurisdictions:

  - Kings County
  - City of Avenal
  - City of Corcoran
  - City of Hanford
  - City of Lemoore

Efforts will continuously be made to monitor the progress of mitigation actions implemented through these other planning mechanisms and where appropriate, their priority actions should be incorporated into updates of this hazard mitigation plan.

Element D: Plan Review, Evaluation and Implementation

§201.6(d)(3): A local jurisdiction must review and revise its plan to reflect changes in development, progress in local mitigation efforts, and changes in priorities, and resubmit if for approval within 5 years in order to continue to be eligible for mitigation project grant funding.

Element D.1 Changes in Development

§201.6(d)(3): A local jurisdiction must review and revise its plan to reflect changes in development, progress in local mitigation efforts, and changes in priorities, and resubmit if for approval within 5 years in order to continue to be eligible for mitigation project grant funding.

This plan has been revised to reflect changes in development within Kings County. Kings County is a moderate to high growth county. Projected developments for the planning period are less than 1000 new housing units and fewer new businesses within the next five years. Historically over the last three censuses the population has been plus 2% of the baseline figure quotes in this plan. There are several development projects planned for the County and participating jurisdictions such as the High Speed Rail Project and expansion of housing projects throughout the county.

Element D.2 Progress in Local Mitigation Efforts

§201.6(d)(3): A local jurisdiction must review and revise its plan to reflect changes in development, progress in local mitigation efforts, and changes in priorities, and resubmit if for approval within 5 years in order to continue to be eligible for mitigation project grant funding.

This plan has been created as a living document with input from the population and professionals within Kings County. The 2007 LHMP has already proven useful in the revision of the Health and Safety Element of the 2010 General Plan.

The tables on the following pages provide a snapshot of the progress made in local mitigation efforts. Detailed descriptions and the summaries of the status of the mitigation actions from the 2007 plan are located in the jurisdictional annexes attached to this document. Each mitigation action in the 2007 planning effort describes whether the action was completed or not and why, whether the action was no longer relevant or if the action is included as part of the 2012 planning effort.

Summary and Status of 2007 Mitigation Actions

Mitigation Action	Links to Goals	Hazards Addressed	Kings County	Avenal	Corcoran	Hanford	Lemoore	Status
Long-Term Water Supply Improve coordination, planning, and investment in long-term water supplies to meet demands of ongoing growth and development.	1,2,3	Multi	**X**				**X**	Overtaken by Events, dropped
Inter-Jurisdictional GIS Program Improve coordination, planning, and investment in long-term water supplies to meet demands of ongoing growth and development.	1,2,3	Multi	**X**				**X**	Completed and ongoing
Assessment of Critical Infrastructure Assess vulnerability of critical infrastructure and lifeline utilities, including water distribution systems, to identify and prioritize projects for multi-hazard risk reduction.	1,2	Multi	**X**	**X**	**X**	**X**	**X**	Completed
Kings County Area Disaster Council Review and update items related to the Kings County Area Disaster Council in the Kings County Emergency Services Ordinance to improve countywide coordination and the monitoring and implementation of the mitigation plan.	3	Multi	**X**	**X**	**X**	**X**	**X**	Partially Completed and carried over to 2012 actions
Public Education Program Develop and implement a comprehensive strategy to improve ongoing public education regarding natural hazards and risk.	1,3	Multi	**X**	**X**	**X**	**X**	**X**	Partially Completed and carried over to 2012 actions
Vulnerable Populations Develop a program or system for supporting vulnerable populations during emergency events.	1,3	Multi	**X**	**X**	**X**	**X**	**X**	Completed
Plans for Special Needs Students Develop a plan for supporting medically fragile and special needs	1	Multi	**X**					Dropped, overcome by events

Mitigation Action	Links to Goals	Hazards Addressed	Kings County	Avenal	Corcoran	Hanford	Lemoore	Status
students at each school site during emergency events.								
Natural Hazards Review Criteria Implement natural hazards review criteria for new development to improve long-term loss prevention.	1,2,3	Multi	**X**	**X**	**X**	**X**	**X**	Completed
Livestock Disposal Plan Establish a livestock disposal plan and compost team to address livestock fatality during extreme heat events.	1,2	Extreme Heat	**X**					Partially Completed and carried over to 2012 actions
Safety Element of General Plan Integrate the hazard mitigation plan with the Safety Element of the Kings County General Plan.	3	Multi	**X**	**X**	**X**	**X**	**X**	Partially Completed and carried over to 2012 actions for the cities
Adoption of DFIRMs Update flood damage prevention ordinance to include new FEMA digital flood insurance rate maps (DFIRMs).	1,3	Flood	**X**	**X**	**X**	**X**	**X**	Completed
Disaster Evacuation Routes Ensure the maintenance and enhancement of established disaster evacuation routes.	1,2	Multi	**X**					Not completed carry over to 2012 actions
Traffic Safety for Fog Events Improve lighting and traffic controls at critical intersections and roadways to improve safety during fog events.	1	Fog	**X**					Not Completed, reevaluated and carry over to 2012 actions
Updated Building Code Adopt the 2006 International Building Code	1,2,3	Multi	**X**	**X**	**X**	**X**	**X**	Completed
Earthquake Hazards at Schools Develop a plan for training school	1	Earthquake	**X**					Dropped, overcome by

Mitigation Action	Links to Goals	Hazards Addressed	Kings County	Avenal	Corcoran	Hanford	Lemoore	Status
maintenance crews to identify and address nonstructural hazards in schools to mitigate earthquake risk.								events
Housing Rehabilitation Program Continue and enhance housing rehabilitation program.	1,2	Earthquake		**X**				Not completed carry over to 2012 actions
Vulnerability of Water Distribution System Reduce vulnerability of water distribution system	1,2	Earthquake		**X**				Not completed carry over to 2012 actions
Loss Reduction Program for URM Buildings Establish a loss reduction program for unreinforced masonry (URM) buildings in compliance with the California URM Law of 1986.	1	Earthquake		**X**				Not completed carry over to 2012 actions
Veterans' Memorial Building Expand the Veterans' Memorial Building and designate it as an emergency shelter	1	Extreme Heat, Multi			**X**			Not completed carry over to 2012 actions
Retrofits of Water Storage Tanks Complete seismic retrofits of two of city's water storage tanks.	1,2	Earthquake			**X**			Not completed carry over to 2012 actions
GIS Database of URMs Develop GIS database of unreinforced masonry (URM) buildings.	1,2	Earthquake			**X**			Not completed carry over to 2012 actions
Retrofit URM Buildings in Downtown Retrofit 58 unreinforced masonry (URMs) buildings in downtown Hanford	1,2	Earthquake			**X**			Not completed carry over to 2012 actions

Element D.3 Changes in Priorities

§201.6(d)(3): A local jurisdiction must review and revise its plan to reflect changes in development, progress in local mitigation efforts, and changes in priorities, and resubmit if for approval within 5 years in order to continue to be eligible for mitigation project grant funding.

The overall priorities in Kings County and the participating jurisdictions in this plan update have changed since the 2007 Mitigation Plan. Several actions were completed and new projects were added to coincide with the changes in priorities, progress in local mitigation efforts and changes in development.

Politically the county has maintained is financially conservative nature in expending available funds and its overall desire to stay true to itself in remaining focused on agricultural preservation. With the lack of disasters and the decline of available funding, the mitigation strategies needed to be revised to fit the overall county priorities and be developed so that most could be started or accomplished for this next 5-year plan cycle.

Element E: Plan Adoption

Requirement §201.6(c)(5): [The plan shall include...] Documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval of the plan (e.g., City Council, County commissioner, Tribal Council).

Element E.1 Formal Adoption Documentation

Requirement §201.6(c)(5): [The plan shall include...] Documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval of the plan (e.g., City Council, County commissioner, Tribal Council).

Kings County and the cities plan to submit this plan to the Kings County BOS and their respective City Councils upon successful completion of state and federal review. Kings County wishes to receive approval pending adoption in order to minimize cost to the county. The plan will be submitted to the Board as a regularly scheduled agenda item with room for additional public and departmental comment. Our approach to this final element is due to the need to remain cost effective in the planning process. By receiving state and federal approval of the plan prior to going to the board, we are able to go to the board on a single date to finalize promulgation of this document. The plan will be in its final format, notification of the public will only have to be done once and copies of the resolution adopting this plan, the relevant section of the minutes of the BOS meeting and roster of attendees of this meeting will be included in appendix B of this plan. The resolution will be inserted before the table of contents. As part of the agenda report the basic requirements for the plan, the scope of the document and the need to revise every five years will be clearly stated. The Kings County OEM staff will be prepared to give an overview of the plan and be prepared to answer any questions related to the document development process and its contents.

Element E.2 Kings County Operational Area Hazard Mitigation Plan

This plan is for Kings County and its incorporated cities including Avenal, Corcoran, Hanford and Lemoore. Therefore there are five (5) required resolutions from the Kings County Board of Supervisors (1) and the City Councils (4).

References

State of California Hazard Mitigation Plan (2010)

Kings County Local Hazard Mitigation Plan (2007)

Kings County 2035 General Plan (2010)

Kings County 2035 General Plan, Health and Safety Element (2010)

Kings County Emergency Operations Plan (2008)

Kings County Flood Management Ordinance Part 32

Kings County Kings County Code of Ordinances, Chapter 5A

Kings County website

Kings County Economic Development Corporation Reports (2010, 2011, and 2012)

Kings County Agricultural Commissioner's Report, 2011

Department of Finance Data, Kings County 2012

Origins and Development: A Chronology of Disasters in California, California Governor's Office of Emergency Services

City-Data.com

National Flood Insurance Program, Community Status Book, 2012

California Department of Water Resources, 2006, "Drought Preparedness."

Federal Emergency Management Agency, Local Mitigation Plan Review Guide, 2011

Multi-Hazard Mitigation Planning Guidance under the Disaster Mitigation Act of 2000

Federal Emergency Management Agency, How To Guide #1, Getting Starting: Building Support for Mitigation Planning

Federal Emergency Management Agency, How-To Guide #2, Understanding Your Risks: Identifying Hazards and Estimating Losses

Federal Emergency Management Agency, How-To Guide #3, Developing the Mitigation Plan: Identifying Mitigation Actions and Implementation Strategies

Federal Emergency Management Agency, How-To Guide #4, Bringing the Plan To Life: Implementing the Hazard Mitigation Plan

Federal Emergency Management Agency, How-To Guide #5, Using Benefit-Cost Review in Mitigation Planning

Federal Emergency Management Agency, How-To Guide #6, Integrating Historic Property and Cultural Resource Considerations into Hazard Mitigation Planning

Federal Emergency Management Agency, How-To Guide #7, Integrating Manmade Hazards into Mitigation Planning

Federal Emergency Management Agency, How-To Guide #8, Multi-Jurisdictional Mitigation Planning

Federal Emergency Management Agency, How-To Guide #9, Using the Hazard Mitigation Plan to Prepare Successful Mitigation Projects

California Emergency Management Agency, Disaster Recovery and Mitigation Handbook

California Emergency Management Agency, Tools for Preparing your LHMP, 2012

Robert T. Stafford Disaster Relief and Energy Assistance Act, Section 322

2010 U. S. Census

California Department of Water Resources, Water Conditions and Drought Report to Governor, 2009

United States Geological Survey website

National Weather Service website

Spatial Hazards Events and Losses Database of the United States website

California Department of Forestry and Fire Protection website

National Register of Historic Places

Fresno-Kings Unit Pre-Fire Management Plan, 2005

California Fire Plan, 2010

Nation Climate Data Center website

Planning Process Documentation

KINGS COUNTY FIRE DEPARTMENT
and
OFFICE OF EMERGENCY MANAGEMENT
280 North Campus Drive • Hanford, California 93230
Phone: 559-852-2881 • Fax: 559-582-8261

February 6, 2012

Re: Multi-jurisdictional Hazard Mitigation Plan Update and Revision Project

The Kings County Operational Area is in the process of updating its Local Hazard Mitigation Plan. The project will result in the preparation and update of a Federally required countywide Multi-jurisdictional Hazard Mitigation Plan. The Disaster Mitigation Act of 2000 requires all local governments to address risks and measures that can be taken in advance to reduce future losses from natural and other related hazards. A Planning Committee will be formed to support this project. In addition to the communities and the tribe, the Planning Committee will include representatives of special districts and other county, state and federal agencies in or that serve Kings County.

The approved mitigation plan will assure that Kings County maintains its eligibility for Federal Pre-Disaster Mitigation (PDM) and Post-Disaster Hazard mitigation Grant Programs (HMGP) and Flood Management Assistance (FMA) grants. The approved plan may also help reduce flood insurance premiums currently paid by county residents and encourage greater participation in the National Flood Insurance Program (NFIP) by those exposed to this risk.

The County has retained Howell Consulting of Sacramento, California to manage the requirements and processes involved in competing this project. The firm has experience in multiple areas of emergency management and with this project area. Howell Consulting has established a team that will work with us throughout this project. The Howell Consulting team will provide "kickoff" briefing for this project and the project requirements on **Thursday, March 23, 2012 at 9:00 am**, in at the, Health Annex Auditorium, Kings County Health Department, 330 Campus Drive.

If not already done so, please send a project point of contact to myself and to RSVP for this briefing via email at tmaletta@co.kings.ca.us

Thank you again for your attention and response to this project. I look forward to your support during the coming months.

Sincerely,

Trudy Maletta
Emergency Services Manager

COMMUNITY PARTNERS WITH AND SERVING THE CITIES OF AVENAL AND CORCORAN, ALL UNINCORPORATED AREAS INCLUDING THE COMMUNITIES OF ARMONA, BURRIS PARK, GUERNSEY, HARDWICK, ISLAND, KETTLEMAN CITY, KIT CARSON, SANTA ROSA RANCHERIA, SOUTH LEMOORE AND STRATFORD

WILLIAM LYNCH – CHIEF
Joe Neves, Board of Supervisors, Emergency Management Director

Tuesday, March 6, 2012 11:14:22 AM Pacific Standard Time

Subject: Local Hazard Mitigation Planning Team Kickoff meeting REMINDER

Date: Tuesday, March 6, 2012 11:13:56 AM Pacific Standard Time

From: Brenna Howell

To: frank.castellanoz@corcoranpd.com, Greg.Gatzka@co.kings.ca.us, jamoroso@cityofavenal.com, kseligman@krcd.org, Bill.Lynch@co.kings.ca.us, mgragnani@westlands.org, Joe.Neves@co.kings.ca.us, Tim.Niswander@co.kings.ca.us, paul.calkins@calema.ca.gov, Reuben.Shortnacy@CorcoranPD.com, rainer.streib@navy.mil, Tieronimo@ci.hanford.ca.us, pat.mundy@lemoorepd.com, wbricker@jgboswell.com, Sabrina.Bustamante@co.kings.ca.us, atorres@tachipalace.com, gary.cramer@corcoranpd.com, dbello@jgboswell.com, jcuara@tachi-yokut.com, njeff@tachi-yokut.com, mike.virden@co.kings.ca.us, Angie Sorrentino, Maletta, Trudy

Good Morning All,

I hope this email finds you well...this is a friendly REMINDER of our upcoming Local Hazard Mitigation Planning Team Kickoff meeting on **Thursday, March 22nd at 0900**. The meeting will be held in the Kings County Health Department Annex Auditorium. The agenda is attached. As we get closer to the meeting date, I will send a copy of the presentation to the group.

At this point, some of you have replied that you would not be able to attend the meeting, so those that are planning to attend please RSVP to this email.

Thanks, looking forward to seeing you all in a few weeks!

Brenna and Team

Brenna Howell, Owner
Howell Consulting
916.202.2635
brenna@brennahowell.com
www.brennahowell.com

HOWELL CONSULTING

Page 1 of 1

Kings County Multi-Hazard Mitigation Plan Kickoff Meeting

Kings County Health Department
Health Annex Auditorium
330 Campus Drive
Hanford, CA

March 22, 2012
9:00 am – 11:00 am

Agenda

1. Introductions
2. Local Hazard Mitigation Plan Purpose, Update and Requirements

3. Multi-Jurisdictional Participation and the Planning Committee
4. Break
5. Hazard Identification and Data Collection Needs
6. Planning for Public Involvement
7. Next Steps

Welcome to Kings County 10/22/12 4:15 PM

Kings County

County of Kings Official Website

Calendar

Board of Supervisors | Human Resources | Sheriff | Assessor | Finance | Public Health | Contact

Doing Business in the County
"To provide quality public services to Kings County residents in the most cost effective and efficient way"

Purchasing Division
Requests for Proposal

About Us

General Information and Maps

Census Information
County Demographics
Government Center Map

County Observed Holidays

Local Driving Conditions
Local Weather

County Employment

Current Openings
View our current positions available.

Job Descriptions
Additional Information
Veterans Preference
County Officials Salaries

County Contacts

Quick Links

Agricultural Commissioner

Board of Supervisors Meetings & Agendas

Detentions Booking / Inmate Information

Election Information and Results
Economic Development Corporation

Proposed Budget 2012-2013 Vol1
Proposed Budget 2012-2013 Vol2
County Adopted Budget 2011-2012

Williamson Act - Farmland Security Zone and SB 863 FAQs

Grand Jury Reports

Grand Jury Final Report 2011-2012
Grand Jury Questionnaire

Job Training Office
KART / AITS Vanpool Services
UC Cooperative Extension

Get ADOBE® READER®

Select Language
Powered by Google **Translate**

Photography by Stephanie Burrage

Kings County Government Center

(559) 582-3211
1400 West Lacey Boulevard.
Hanford, CA 93230

County Links
Other Information & Links

This site provides links to information including links originating at sites not controlled or reviewed by the County. The County is not responsible for the accuracy, copyright compliance, legality or decency of such information. It is the responsibility of the user, to evaluate the value of any product or service described or offered therein.

Kings County Search

Search

County Services Go

County Departments Go

Kings County Video TourBook

Welcome

Real Estate and Relocation

Quality of Life

Education

Downtown

Arts and Entertainment

Business Development

Register to VOTE

National Voter Registration Week!

Oversight Board for the Successor Agency for the County of Kings

Coast to Coast Rx Cards

County Animal Services Site

Smoking Cessation Classes

Current Public Auctions for Kings County

LHMP Updates

SCE Safety First: Power Lines

Valley Air Pollution Control District
Daily Air Quality Forecast
Burn Day Information

Veteran's Services Office News
Veteran's Corner - Our Office is here to assist you!

Department of Public Health

Birth Defects Investigation Report
Clinic Schedules and latest information

Office of Emergency Management
The official disaster preparedness site.
Emergency Preparedness

Public Surplus Site
Public Surplus
How to purchase county surplus

Animal Services
Check for Lost & Found Pets

email login:

3/22/12 sign in sheets unable to locate

Kings County Multi-Hazard Mitigation Plan
Kickoff Meeting Notes
March 22, 2012

Emergency Services Manager Trudy Maletta kicked off the meeting with a brief introduction on the overall project scope and purpose. She discussed the timelines for project completion and commitment of the Planning Team during the planning process. She then introduced the group to Howell Consulting, the firm selected to facilitate the LHMP process for Kings County. Brenna Howell and Neal O'Hair introduced themselves and Brenna talked about the project scope and timelines.

Brenna and Neal provided a presentation to the Planning Team members that covered the following:

- Local Hazard Mitigation Plan Purpose, Update and Requirements
- Multi-Jurisdictional Participation and the Planning Committee
- Hazard Identification and Data Collection Needs
- Planning for Public Involvement

Next Steps - the Planning Team will work with the consultants to set up the public workshops announcing the LHMP process, purpose of the planning process. The workshops will cover the hazards in Kings County will also briefly talk about personal preparedness in addition to take questions/comments from the public. These workshops will likely occur in May during the week of May 14th.

Kings County Office of Emergency Management
Local Hazard Mitigation Plan Update
Public Meetings Notice

Your Input is Needed!

Kings County is in the process of updating its Local Hazard Mitigation Plan. The plan will assess the likelihood of various natural hazards such as flooding, fires, earthquakes, severe weather and more. A critical component of the planning process is **YOU**.

We are seeking the participation of people living in the community to help us assess the likelihood of natural hazards and to identify measures to minimize impacts.

Nationwide, taxpayers pay billions of dollars annually helping communities, organizations, businesses, and individuals recover from disaster. Some natural disasters are predictable, and in many cases much of the damage can be reduced or even eliminated. The Federal Emergency Management Agency (FEMA) has targeted natural disaster loss reduction as one of its primary goals. The federal Disaster Mitigation Act of 2000 requires local governments to maintain a FEMA-approved Hazard Mitigation Plan in order to maintain eligibility for certain federal disaster assistance and hazard mitigation funding programs.

Each participating jurisdiction in Kings County will have its own section within the overall Kings County Plan. Your comments and ideas are invited to attend one of the upcoming public meetings on:

Monday, May 14, 2012	**Tuesday, May 15, 2012**	**Wednesday, May 16, 2012**
Hanford City Training Room	Corcoran Council Chambers	Avenal Veteran's Hall
317 N. Douty Street	832 Whitley Avenue	108 W. Kings St
Hanford, CA 93230	Corcoran, CA 93212	Avenal, CA 93204
6:00 pm	**6:00 pm**	**6:00 pm**

The overall purpose of these meetings are to inform the public on the purpose and planning process for the local hazard mitigation plan development, present the types of hazards in or possibly affecting Kings County, and seek input from the public on priorities for risk reduction.

If you are unable to attend one of the above meetings, we have also developed a public survey that is located on the www.countyofkings.com website to gain your important input into this planning process.

If you have any questions or would like to leave a comment please email us at kingscounty.oem@countyofkings.com or call the Office of Emergency Management at (559) 852-2881.

Local Hazard Mitigation Plan update public meetings

Your Input is Needed!

Kings County is in the process of updating its Local Hazard Mitigation Plan. The plan will assess the likelihood of various natural hazards such as flooding, fires, earthquakes, severe weather and more. A critical component of the planning is YOU.

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6:00 p.m.

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Corcoran, CA 93212
6:00 p.m.

Wednesday, May 16, 2012
Avenal Veteran's Hall
108 W. Kings Street
Avenal, CA 93204
6:00 p.m.

The overall purpose of these meetings are to inform the public on the purpose and planning process for the local hazard mitigation plan development, present and types of hazards in or possibly affecting Kings County, and seek input from the public on priorities for risk reduction.

If you are unable to attend one of the above meetings, we have also developed a public survey that is located on the www.countyofkings.com website to gain your important input into this planning process.

If you have an questions or would like to leave a comment email us at kingscounty.oem@countyofkings.com or call the Office of Emergency Management at (559) 852-2881.

AHS recipients awarded at Young Writers Conference

Students of Ms. Stephanie Huebschle's Creative Writing class at Avenal High School attended the 32nd annual Young Writers Conference at Fresno State University on March 28. Ms. Huebschle's class was among the 300 students in attendance that hailed from 20 schools around the central valley. Students were treated with a speech and reading from acclaimed poet and novelist Liza Weiland participated in workshops in poetry and non fiction writing and a top few were awarded cash prizes for their submissions.

Amy Rodrigues was among the winners, taking home the Fresno Poets Association award for her poem, Apocalypse. Stephanie Huebschle was also awarded for starting a successful creative writing program at AHS and exhibiting excellence in teaching. Congratulations to Amy and Ms. Huebschle, as well as all of the AHS students who submitted their work at the Young Writers Conference.

RAP Upcoming Activities

Youth Soccer Developement Program
Early Registration
(through June 1st): $25
Registration
(June 2nd-June 9th): $35
Last day to register is

Youth Dance Clases
June 11, - Aug. 1
$30 per participant
Creative Dance:
Ages 4-7
Jazz:
Ages 8-12
Space is limited, sign

Free Soccer Clinic
June 9, 2012 at the
Avenal Sports Complex
Ages 5-13

Kings County
Multi-jurisdictional Local Hazard Mitigation Plan (LHMP) Project
Public Meeting - Hanford/Lemoore
May 14, 2012; 6:00 pm

	NAME	AGENCY/FUNCTION	PHONE (cell, pager, home)	EMAIL
1	Edwin Vanderbeek	ARES / RACES Kings Amateur Radio Club	559-816-3347	edwin.vanderbeek@comcast.com
2	GREG HENRY	PVUSD SAFETY COORDINATOR	559-584-0112	henryg@pvusd.k12.ca.us
3	TRUDY MALETTA	KINGS CO. OEM		
4	Tim Jeronimo	Hanford Fire Dept	559-585-2545	

Kings County
Multi-jurisdictional Local Hazard Mitigation Plan (LHMP) Project
Public Meeting - Corcoran
May 15, 2012; 6:00 pm

	NAME	AGENCY/FUNCTION	PHONE (cell, pager, home)	EMAIL
1	GARY CRAMER	CORCORAN P.D. / DEP. CHIEF	559-469-1279	GARY.CRAMER@CORCORANPD.com
2	NICK NOLAN	CDH	559-992-5051	nnolan@corcoranhospital.org

Kings County
Multi-jurisdictional Local Hazard Mitigation Plan (LHMP) Project
Public Meeting - Avenal
May 16, 2012; 6:00 pm

	NAME	AGENCY/FUNCTION	PHONE (cell, pager, home)	EMAIL
1	JOHN R. "JACK" AMOROSO	AVENAL POLICE DEPT	559-~~469~~-6154	JAMOROSO@CITYOFAVENAL.COM

Public Meeting Sign in Sheets

Kings County LHMP Survey Explanation

Kings County and its respective municipalities are working together to prepare a Local Hazard Mitigation Plan. The purpose of this plan is to identify and assess our community's disaster risks and determine how to best minimize or mitigate against those risks.

This quick survey provides an opportunity for you to share your opinions and participate in the planning process. The information you provide will help us better understand your hazard concerns and identify area policies and projects that may help lessen the impact of future events.

The survey should take less than five minutes to complete. The Kings County Local Hazard Mitigation Planning Team thanks you for taking the time to participate in our survey.

placed on county website
w/ survey monkey link.

Kings County Hazard Mitigation Plan Survey

SurveyMonkey

1. Do you own property in Kings County?

	Response Percent	Response Count
Yes	**83.3%**	**10**
No	16.7%	2
Other (please specify)	0.0%	0
	answered question	**12**
	skipped question	**0**

2. Where do you live in Kings County?

	Response Percent	Response Count
Armona	0.0%	0
Avenal	8.3%	1
Corcoran	0.0%	0
Hanford	**50.0%**	**6**
Lemorre	25.0%	3
Kettleman City	0.0%	0
Stratford	0.0%	0
Other (please specify)	16.7%	2
	answered question	**12**
	skipped question	**0**

3. Are you a full-time or part-time resident? If part-time please explain.

	Response Percent	Response Count
Full-time	**91.7%**	**11**
Part-time	0.0%	0
Other (please specify)	8.3%	1
	answered question	**12**
	skipped question	**0**

4. Do you work in Kings County?

	Response Percent	Response Count
Yes	**91.7%**	**11**
No	8.3%	1
	answered question	**12**
	skipped question	**0**

5. Which of the following hazards have you or your family experienced in Kings County in the last 20 years? (Check all that apply)

	Response Percent	Response Count
Dam/Levee Failure	0.0%	0
Drought	58.3%	7
Earthquake	50.0%	6
Erosion	0.0%	0
Flood	25.0%	3
Land/Rockslide	0.0%	0
Severe Weather (extreme heat, freeze, high winds, etc.)	**75.0%**	**9**
Wildland/Urban Area Fire	25.0%	3
None	25.0%	3
Other (please specify)	8.3%	1
	answered question	**12**
	skipped question	**0**

6. How prepared is your household for a natural hazard event?

	Response Percent	Response Count
Not at all prepared	8.3%	1
Somewhat prepared	**66.7%**	**8**
Adequately prepared	8.3%	1
Well prepared	8.3%	1
Very well prepared	8.3%	1
	answered question	**12**
	skipped question	**0**

7. How concerned are you about the possibility of your community being impacted by a natural hazard event?

	Response Percent	Response Count
Not concerned	0.0%	0
Somewhat concerned	**66.7%**	**8**
Extremely concerned	33.3%	4
	answered question	**12**
	skipped question	**0**

8. What steps has your household taken to prepare for a natural hazard event? (Check all that apply)

	Response Percent	Response Count
(First Aid/CPR	83.3%	10
Home/Business evacuation plan	50.0%	6
Designated meeting place	41.7%	5
Identification of utility shutoffs	58.3%	7
Disaster Preparedness Kits	8.3%	1
Installed smoke/carbon monoxide detectors	**91.7%**	**11**
Debris clearance around home for defensible space	16.7%	2
Natural hazards insurance (fire, flood, earthquake)	33.3%	4
Fire extinguisher	66.7%	8
None	0.0%	0
Other (please specify)	0.0%	0
	answered question	**12**
	skipped question	**0**

9. How concerned are you about the following natural hazards affecting Kings County? (Check a response for each hazard)

	Not Concerned	Somewhat Concerned	Concerned	Response Count
Dam/Levee Failure	45.5% (5)	**54.5% (6)**	0.0% (0)	11
Drought	0.0% (0)	18.2% (2)	**81.8% (9)**	11
Earthquake	0.0% (0)	**72.7% (8)**	27.3% (3)	11
Erosion	**72.7% (8)**	18.2% (2)	9.1% (1)	11
Flood	36.4% (4)	**54.5% (6)**	9.1% (1)	11
Land/Rockslide	**72.7% (8)**	27.3% (3)	0.0% (0)	11
Severe Weather	8.3% (1)	**50.0% (6)**	41.7% (5)	12
Wildland Fire	36.4% (4)	**45.5% (5)**	18.2% (2)	11
None	0.0% (0)	0.0% (0)	0.0% (0)	0
			Other (please specify)	0
			answered question	**12**
			skipped question	**0**

10. Which of the following methods do you feel are the most effective ways to provide hazard and disaster information in Kings County?

	Response Percent	Response Count
Newspaper	8.3%	1
Informational Brochure	0.0%	0
Local Civic groups (Rotary Club, Lion's Club, etc.)	0.0%	0
Faith-based groups/organizations	0.0%	0
Community Bulletin Board	0.0%	0
Public workshop/meeting	0.0%	0
Public Library	0.0%	0
Local TV News	**50.0%**	**6**
Local Cable Acces Channels	8.3%	1
Local Radio Stations	0.0%	0
Post Office	0.0%	0
Public Safety Offices (Fire, Law Enforcement)	25.0%	3
Schools	8.3%	1
	answered question	**12**
	skipped question	**0**

11. Which of the following incentives would encourage you to spend money to retrofit your home to protect against natural disasters? (Check all that apply)

	Response Percent	Response Count
Building permit fee waiver	50.0%	6
Insurance premium discount	**83.3%**	**10**
Property tax break or incentive	75.0%	9
None	8.3%	1
	answered question	**12**
	skipped question	**0**

12. Please indicate your age range:

	Response Percent	Response Count
Under 18	0.0%	0
18 - 30	0.0%	0
31 - 40	16.7%	2
41 - 50	16.7%	2
51 - 60	25.0%	3
61 - 70	**41.7%**	**5**
71 - 80	0.0%	0
80 or older	0.0%	0
	answered question	**12**
	skipped question	**0**

13. Please indicate the primary languages spoken in your household:

	Response Percent	Response Count
English	**100.0%**	**12**
Spanish	0.0%	0
Portuguese	0.0%	0
Asian or Pacific Island language	0.0%	0
Other (please specify)	0.0%	0
	answered question	**12**
	skipped question	**0**

14. Please indicate your gender:

	Response Percent	Response Count
Male	**66.7%**	**8**
Female	33.3%	4
	answered question	**12**
	skipped question	**0**

15. How long have you lived in Kings County?

	Response Percent	Response Count
Less than 1 year	9.1%	1
1 - 5 years	18.2%	2
6 - 10 years	0.0%	0
11 - 20 years	18.2%	2
More than 20 years	**54.5%**	**6**
	answered question	**11**
	skipped question	**1**

16. Do you have regular access to the internet?

	Response Percent	Response Count
Yes	**100.0%**	**12**
No	0.0%	0
	answered question	**12**
	skipped question	**0**

17. Are there any other issues regarding the reduction of risk and loss associated with natural hazards in your community that you think are important?

	Response Count
	1
answered question	**1**
skipped question	**11**

18. Are there any additional comments that you would like to address that were not contained in this survey?

	Response Count
	2
answered question	2
skipped question	10

Kings County Multi-Hazard Mitigation Plan Update Meeting

Kings County
Human Services Agency
Building 8
Hanford, CA

July 13, 2012
1:30 pm – 3:30 pm

Agenda

1. Introductions
2. Local Hazard Mitigation Development Update

3. Planning Team Vote on Natural Hazards
4. Public Meeting Results, More Public Outreach Opportunities
5. Hazard Identification and Data Collection Needs
6. Mitigation Strategies Review from 2007 Plan
7. Next Steps

Kings County Multi-Hazard Mitigation Plan
Meeting Notes
July 13, 2012

Brenna and Neal provided a presentation to the Planning Team members that covered the following:

- Local Hazard Mitigation Plan Development Update and Progress to date
- Public Meeting Results
- Public Participation Survey status to date
- Hazard Identification and Data Collection Needs

Brenna presented to the group the need to take a vote on including only natural hazards in the updated plan or including human caused and technological hazards facing Kings County and the cities. It was a unanimous vote by the planning team to only include natural hazards in the plan update.

The group also discussed the need to expand on the natural disasters facing Kings County. The planning team voted to expand on heavy winds on the west side as well as including dust storms from the heavy winds. Brenna and Neal will do some research on those hazards.

Next Steps – Brenna will work with the Fire Department to set up the next planning team meeting sometime in September. This meeting will focus specifically on past mitigation strategies noted in the 2007 plan and will develop and prioritize new strategies for the updated plan.

Kings County
Multi-jurisdictional Local Hazard Mitigation Plan (LHMP) Project
Planning Team Meeting
Human Services Agency, Bldg 8
July 13, 2012, 1:30 pm

	NAME	AGENCY/FUNCTION	PHONE (cell, pager, home)	EMAIL
1	Trudy Maletta	Kings Co. OEM	559-852-2881	
2	Bill Lynch	KCFD	852-2880	
3	Mike Virden			
4	Janice Cuara			
5	~~Nathan Jeff~~ Alex Torres	Tachi Palace Hotel & casino	559-212-5636	atorres@tachipalace.com
6	Tim Niswander	Kings Dept. of Ag	(559) 852-2830	Tim.niswander@co.kings.ca.us
7	Tim Ieronimo			
8	Greg Gatzka			
9	Chuck Kinney	KC CSD	852-2674	Chuck.Kinney@co.kings.ca.us
10	Jeremy Kinney	KC Planning	852-2673	jeremy.kinney@co.kings.ca.us

Kings County
Multi-jurisdictional Local Hazard Mitigation Plan (LHMP) Project
Planning Team Meeting
Human Services Agency, Bldg 8
July 13, 2012, 1:30 pm

11	Angie Sorrentino	teleconference call		
12	David Greer			
13	Brenna Howell	Consultant		
14	JACK AMOROSO	AVENAL PD		
15	Pat Mundy	Lemoore P.D.	Pat.Mundy@lemoorepd.com	
16	Joe Neves	KC BOS		
17	GARY CRAMER	CORCORAN P.D.	GARY.CRAMER@CORCORANPD.COM	
18				
19				

Kings County Multi-Hazard Mitigation Plan Update Meeting

Kings County Fire Administration
EOC
September 27, 2012
2:00 pm – 4:30 pm

Agenda

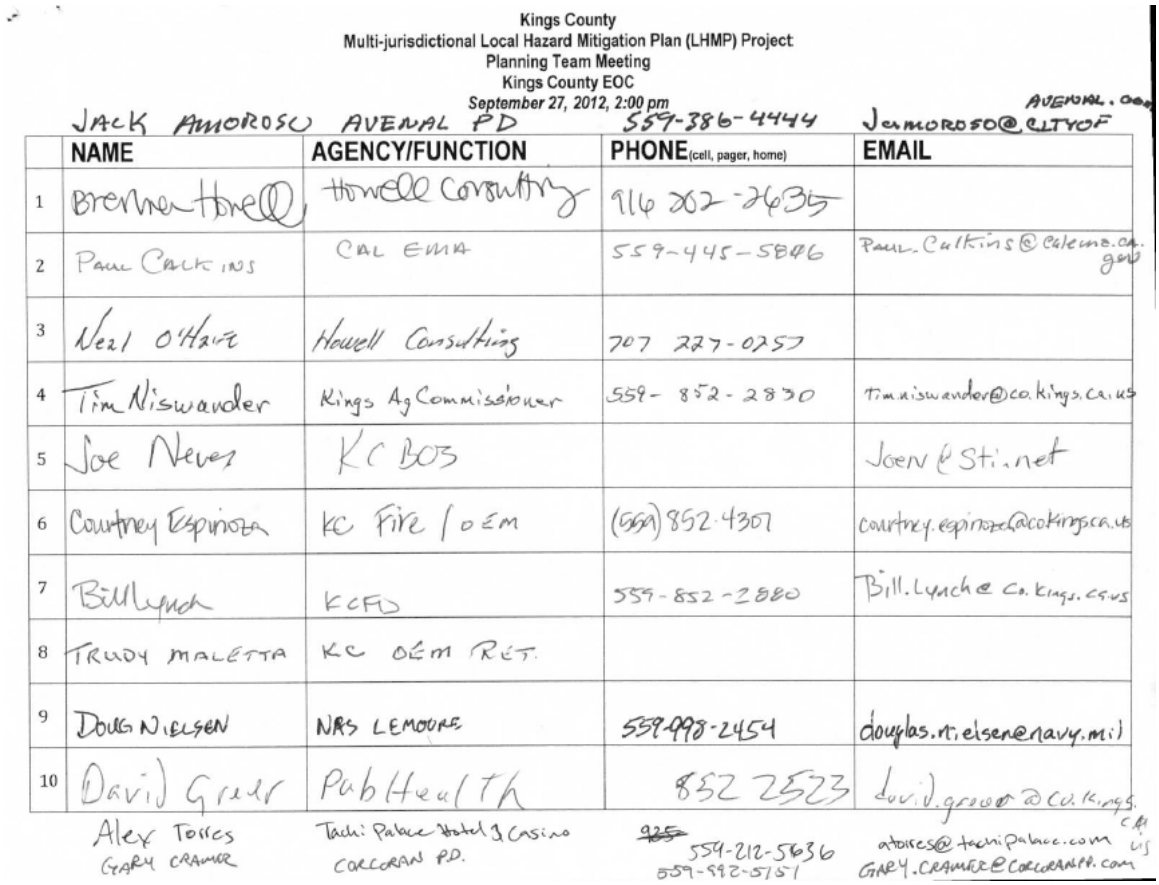
1. Introductions
2. Information Collection Tool Results – Cites/County Report out on Findings
2. Mitigation Strategies

   Review old strategies for each participating jurisdiction to determine if completed

   Develop new strategies for each participating jurisdiction

   Prioritize strategies for plan update

3. Planning for Public Involvement – Survey Results to Date
4. Next Steps



Kings County
Multi-jurisdictional Local Hazard Mitigation Plan (LHMP) Project
Planning Team Meeting
Kings County EOC
September 27, 2012, 2:00 pm

JACK AMOROSO AVENAL PD 559-386-4444 JAMOROSO@CITYOF AVENAL.CA.

	NAME	AGENCY/FUNCTION	PHONE (cell, pager, home)	EMAIL
1	Brenner Howell	Howell Consulting	916 202-2635	
2	Paul Calkins	CAL EMA	559-445-5806	Paul.Calkins@caloes.ca.gov
3	Neal O'Hare	Howell Consulting	707 227-0757	
4	Tim Niswander	Kings Ag Commissioner	559-852-2830	Tim.niswander@co.kings.ca.us
5	Joe Neves	KC BOS		Joen@sti.net
6	Courtney Espinoza	KC Fire / OEM	(559) 852-4307	courtney.espinoza@cokingsca.us
7	Bill Lynch	KCFD	559-852-2880	Bill.Lynch@co.kings.ca.us
8	TRUDY MALETTA	KC OEM RET.		
9	DOUG NIELSEN	NAS LEMOORE	559-998-2454	douglas.nielsen@navy.mil
10	David Greer	Pub Health	852 2523	david.greer@co.kings.ca.us
	Alex Torres GARY CRAMER	Tachi Palace Hotel & Casino CORCORAN P.D.	~~925~~ 559-212-5636 559-992-5151	atorres@tachipalace.com GARY.CRAMER@CORCORANPP.com

Thursday, January 3, 2013 8:35:56 AM Pacific Standard Time

Subject: FW: Kings County Office of Emergency Management Press Release
Date: Friday, December 21, 2012 10:44:41 AM Pacific Standard Time
From: Espinoza, Courtney
To: Lynch, Bill
CC: Brenna Howell (brenna@brennahowell.com)
Priority: High

FYI...Press Release went out.

Courtney

KINGS COUNTY
OFFICE OF EMERGENCY MANAGEMENT
Emergency Services Coordinator
Courtney Espinoza
280 Campus Drive
Hanford, CA 93230
courtney.espinoza@co.kings.ca.us
Direct (559) 852-2883 • Cell (559) 469-2843 • Fax (559) 582-8261
WWW.COUNTYOFKINGS.COM

From: Brasov, Angela
Sent: Friday, December 21, 2012 10:32 AM
To: ABC 30; B Anderson; CBS47; Corcoran Journal; Eddie Jimenez; Fresno Bee; Fresno Bee South Valley; Hanford Sentinel; Hanford Sentinel ; Hanford Sentinel eyamashita@hanfordsentinel.com; Jessica Peres; Jim Guy; jmstnews@yahoo.com; kathleen Coates; kftvnews@univision.net; KJUG 106.7 FM Z104.9 FM; KMJ Radio; KMPH News; KSEE 24 News; KZPO Kings Radio; Lew Griswold; lp; M Benjamin; mc; mm; Nancy Price; rcardenas@univision.net; Tim Jue; Valley PBS ; Visalia Times Delta
Cc: Espinoza, Courtney
Subject: Kings County Office of Emergency Management Press Release
Importance: High

Good morning,

Attached is a Press Release from the Kings County Office of Emergency Management. Should you have any questions, please contact Courtney Espinoza at (559) 852-2883 or at Courtney.Espinoza@co.kings.ca.us. Thank you.

KINGS COUNTY
OFFICE OF EMERGENCY MANAGEMENT
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280 North Campus Drive • Hanford, California 93230
Phone: 559-852-2883 • Fax: 559-582-8261

PRESS RELEASE

To: Interested Parties

Regarding: Draft Kings County Multi-Hazard Mitigation Plan Available for Review

Kings County together with the cities of Avenal, Corcoran, Hanford, and Lemoore and the Tachi Yokut Tribe have worked to develop a draft of the Kings County Multi-Hazard Local Mitigation Plan to address potential natural hazards before they occur and to maintain eligibility for mitigation funding from the Federal Emergency Management Agency (FEMA).

The plan addresses a comprehensive list of natural hazards—ranging from earthquake and flooding to wildfire, extreme heat, and drought—and assesses the likely impacts of these hazards to communities in Kings County. It also sets goals and prioritizes projects to reduce the impacts of future disasters on people and property in the county.

We encourage you to please review and comment on this important plan, which must be approved by the Kings County Board of Supervisors, the governing bodies of each participating jurisdiction, the State of California, and FEMA. Your comments will be considered by the Hazard Mitigation Planning Team and incorporated into the plan, as appropriate, as well as documented as part of the planning process.

The draft plan is available for your review at the following locations:

- www.countyofkings.com under the LHMP update link
- Kings County Fire Department
- Kings County Administration
- Kings County Community Development
- Avenal City Manager's Office
- Corcoran City Manager's Office
- Hanford City Manager's Office
- Lemoore City Manager's Office
- All Kings County Public Libraries

The deadline for public comment on the draft plan is January 16, 2012. Comments may be submitted in one of the following ways:

Drop off or email your written comments to:

Kings County Office of Emergency Management
Attn: Courtney Espinoza
280 North Campus Drive
Hanford, CA 93230
Tel: (559) 852-2883
Email: Courtney.Espinoza@co.kings.ca.us

If you have questions on this planning project, please contact me at (559) 852-2883 or at Courtney.Espinoza@co.kings.ca.us. Thank you in advance for your input.

Sincerely,
Courtney Espinoza, Emergency Services Coordinator
Kings County Office of Emergency Management


Kings County
County of Kings Official Website
Board of Supervisors
Human Resources
Sheriff
Assessor
Finance
Public Health
Contact
Doing Business in the County
"To provide quality public services to Kings County residents in the most cost effective and efficient way"
Purchasing Division
Requests for Proposal
About Us
General Information and Maps
Census Information
County Demographics
Government Center Map
County Observed Holidays
Local Driving Conditions
Local Weather
County Employment
Current Openings
View our current positions available.
Job Descriptions
Additional Information
Veterans Preference
County Officials Salaries
County Contacts
Kings County Search
Search
County Services
Go
County Departments
Go
Kings County Video TourBook
Welcome
Real Estate and Relocation
Quality of Life
Education
Downtown
Arts and Entertainment
Business Development
Flu shots & information
Kings County Draft LHMP - 2012
Oversight Board for the Successor Agency for the County of Kings
Coast to Coast Rx Cards
County Animal Services Site
Smoking Cessation Classes
Current Public Auctions for Kings County
LHMP Updates
SCE Safety First: Power Lines

KINGS COUNTY
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Community Profile Annexes