



FLOOD MITIGATION PLAN

October 2006

Prepared for:

**Tehama County Flood Control &
Water Conservation District**

Prepared by:

**Wood Rodgers, Inc.
Sacramento, CA**

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EXECUTIVE SUMMARY

This Flood Mitigation Plan (FMP) was prepared on behalf of the Tehama County Flood Control and Water Conservation District (District).

The purpose of this FMP is to identify and characterize hazards and risks associated with flooding in Tehama County and to develop an Action Program comprised of mitigation measures to reduce or eliminate long-term risks to people and property. This FMP has been prepared to facilitate serving the flood hazard element of a Multi-Hazard Mitigation Plan that Tehama County may prepare in the future to meet the requirements of the Disaster Mitigation Act of 2000 (DMA 2000), and to qualify the County for flood mitigation project funding through the Federal Emergency Management Agency (FEMA). The FMP and implementation thereof will provide the opportunity for Tehama County to participate in FEMA's Community Rating System (CRS) Program.

Since 1950, the State of California has proclaimed Tehama County in nine states of emergency due to flooding and residents have received nearly \$2 million in flood insurance claims during the period 1978 to 2005, within the incorporated and unincorporated areas of Tehama County. Repetitive losses associated with 93 repetitive loss properties amount to nearly \$1.2 million. The amount paid through documented Damage Survey Reports (DSRs) associated with declared disasters amounts to nearly \$3 million. Although not documented, damages incurred by citizens of Tehama County are known to be substantial; however, the individual property owners have borne the entire cost of repair, thus the amount cannot be quantified.

The type and rate of flooding experienced in Tehama County varies. Along the Sacramento River the depth and timing of flooding is somewhat predictable with information from the forecast in flood releases from Shasta Dam and stream flow gages on major tributaries between Shasta Dam and Tehama County. On the valley floor, however, the flooding occurs quickly both east and west of the Sacramento River without advance warning, which causes widespread flooding of property and primary transportation routes. This renders ingress and egress problematic for extended periods of time.

The process followed in preparing the FMP and the FMP itself follows the approach and guidelines prescribed by FEMA. A steering committee comprised of representatives of Tehama County, the Sheriff's Office, the California Department of Water Resources (DWR), the California Department of Forestry and Fire Protection, the Sacramento River Conservation Area Forum, and the cities of Tehama and Corning. The main function of the steering committee was to provide background data and information, guidance in planning and conducting the public meetings, and input and review of the FMP. Public meetings and presentations were conducted to obtain input and concerns on flood-related issues with follow-up reconnaissance to observe field conditions within flood prone areas.





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The FMP addresses the flooding hazards in Tehama County by providing the following:

- Ø A risk assessment component, which characterizes the flooding hazards.
- Ø A vulnerability assessment to flooding, which includes an inventory of critical facilities and the values of improvements in areas prone to flooding but not necessarily within a FEMA designated Special Flood Hazard Areas (SFHAs).
- Ø An Action Program comprised of flood hazard mitigation measures to mitigate the source of flooding that cause repetitive losses and to prevent the occurrence of flood damage to other existing structures and new structures as well.
- Ø A process to implement, monitor, evaluate, and update the FMP; continue public involvement; and to refine and implement flood hazard mitigation measures and determine appropriate timing for Corning, Red Bluff and Tehama County to participate in FEMA's CRS Program.

The Action Program presented in the FMP consists of the following:

- Action No. 1 Formulate Design Criteria and Standards to Handle Storm Runoff Quantity and Quality
- Action No. 2 Prepare Topographic Mapping of the Valley Area of Tehama County
- Action No. 3 Review, Update, and Implement Existing and/or New Ordinances
- Action No. 4 Perform a Detailed Floodplain Analysis to Determine Drainage Patterns, the Extent and Cause of Flooding, and to Establish the Base Flood Elevation (BFE) to Administer the National Flood Insurance Program (NFIP) and Floodplain Management Regulations
- Action No. 5 Formulate and Implement an "Elevation" Project to Identify Homes and Structures that Should be Elevated and Homeowners that Would be Interested in Participating in the Project
- Action No. 6 Determine the 100-Year Floodplain Along the Sacramento River to be Used for the NFIP – FEMA FIRM vs. USACE Comprehensive Study
- Action No. 7 Formulate and Implement an Invasive Plant Species Removal and Maintenance Program
- Action No. 8 Formulate a Flood Hazard Mitigation Plan and Perform a Feasibility Study
- Action No. 9 Formulate a Flood Management Plan for Jewett and Burch Creeks in the Vicinity of Corning





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- Action No. 10 Investigate and Implement Debris Management at Bridges
- Action No. 11 Establish a Flood Hazard Mitigation Coordinating Committee (FHMCC)
- Action No. 12 Formulate and Implement a Flood Hazard Public Outreach Program
- Action No. 13 Develop an Early Warning and Flood Alert System





ACRONYMS

BFE	Base Flood Elevation
Comp Study	Sacramento and San Joaquin River Basins Comprehensive Study (DWR)
CRS	Community Rating System
District	Tehama County Flood Control & Water Conservation District
DMA 2000	Disaster Mitigation Act of 2000
DSR	Damage Survey Reports
DWR	California Department of Water Resources
EWP	Emergency Watershed Protection Program
FEMA	Federal Emergency Management Agency
FHMCC	Flood Hazard Mitigation Coordination Committee
FIRM	Flood Insurance Rate Map (FEMA)
FMA	Flood Mitigation Assistance
FMP	Flood Mitigation Plan
HMGP	Hazard Mitigation Grant Program
LHMP	Local Hazard Mitigation Plan
NFIP	National Flood Insurance Program
NRCS	Natural Resources Conservation Service
OES	Office of Emergency Services
PA	Public Assistance
PDM	Pre-Disaster Mitigation
RCD	Resource Conservation District
SFHA	Special Flood Hazard Areas
USACE	U.S. Army Corps of Engineers





SECTION 1.0 – INTRODUCTION

1.1 Background

Tehama County is located in the Sacramento Valley midway between the city of Sacramento and the Oregon border. The County Seat, Red Bluff, is located on Interstate 5 and the Sacramento River, and is approximately 135 miles north of Sacramento, and is one of three incorporated cities in Tehama County along with the cities of Corning and Tehama (Map 1). Tehama County encompasses an area of nearly 3,000 square miles and is divided by the Sacramento River, which flows through the county from north to south. Approximately 35 percent of the county is west of the Sacramento River and 65 percent is east. The county is bordered on the west by Trinity and Mendocino Counties along the Pacific Coast Range, Shasta County on the north, Plumas County on the east along the ridgeline of the Sierra Nevada—Cascade Mountains, and on the south by Butte and Glenn Counties.

Climate

The climate of Tehama County is characterized by warm to hot dry summers and cool wet winters. The precipitation pattern for the northern part of the Sacramento Valley is one of large cyclonic storms in the winter months and infrequent thunderstorms in the summer months. Almost all precipitation occurs in the winter months, which extends from November to April. Precipitation usually occurs as rain below the 4,000-foot elevation and as snow above 4,000 feet. The lower edge of the normal semi-permanent snow pack is approximately 5,000 feet.

The average annual precipitation in the central part of Tehama County, along the Sacramento River, is about 20 inches. The average annual precipitation along the west side and east side of the county is approximately 50 inches and 70 inches, respectively.

Physical Features

The topography of Tehama County is predominantly foothills and mountains in its eastern and western portions, and the Sacramento Valley occupies most of the area in between. The topography on the west side varies significantly from the flat valley areas of the Sacramento Valley to the mountainous upper reaches. The lowest elevation at the Sacramento River is approximately 150 feet msl increasing to the highest elevation of 8,094 feet msl at the South Yolla Bolly Mountain.

The east side of Tehama County is a wide fertile valley bordered by rolling foothills and by the Sierra Nevada—Cascade Mountains reaching an elevation of approximately 7,000 feet. The area is typified by streams that originate in the mountains and flow westerly into the Sacramento River. The stream channels are sharply incised in the narrow valley bottoms above the foothill line.





The ownership of land within Tehama County is shown on Map 2.

Population

According to the 2000 U.S. Census, the population of the unincorporated area of Tehama County had a reported population of 35,719. The county's estimated total population in 2004 was approximately 58,175, of which 37,865 resided in the unincorporated area of the county. By 2020, the population is projected to increase to 68,323 residents with approximately 47,300 residing in the unincorporated area. It is recognized that the proposed developments—Del Webb Sun City Tehama and Morgan Ranch—and the prospects of others, could alter these growth projections. The general distribution and density of the current population is shown on Map 3. Presented on Map 4 is the change in land use between 1994 and 1999, with the change in residential or urban areas highlighted.

Employment

Tehama County's unemployment rate has been higher than that of the state overall. This pattern is typical of rural counties in which agriculture has a predominant role in the economy. The unemployment rate between 1999 and 2003 ranged from 6.4 to 7.2 percent. Presented in Table 1 is the composition of the employment by industry.

Rivers and Streams

Presented on Map 5 are the principal watersheds within Tehama County. Except for small drainage areas that drain to Black Butte Reservoir and Stony Creek on the west side and Pine Creek on the east side, all water originating in Tehama County drains to the Sacramento River within the county or on the county's boundary. Cottonwood Creek and Battle Creek form the boundary between Tehama and Shasta Counties. The Sacramento River at the Red Bluff Diversion Dam drains approximately 9,150 square miles. Shasta Dam, an important flood control structure on the Sacramento River, is approximately 69 miles upstream of Red Bluff and controls runoff from approximately 6,670 square miles, or 73 percent of the Sacramento River watershed upstream of Red Bluff. Presented on Map 6 are the stream flow and precipitation stations in the county.

The principal tributaries to the Sacramento River from the west and from the east are shown on Map 5 and are listed below. In addition, there are several smaller tributaries that enter the Sacramento River in between the principal watersheds noted. Generally, the tributaries whose watersheds originate in the higher elevations in both the west and east side of the Sacramento River are perennial, whereas those originating at lower elevations are generally seasonal. The watersheds originating at the higher elevations can be seen on Map 5 and are noted as perennial in the list presented below.





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West Side Tributaries

- Ø Cottonwood Creek (P)*
- Ø Reeds Creek
- Ø Red Bank Creek(P)
- Ø Oat Creek
- Ø Elder Creek(P)
- Ø McClure Creek
- Ø Thomes Creek(P)
- Ø Jewett Creek
- Ø Burch Creek
- Ø Hall Creek

East Side Tributaries

- Ø Battle Creek(P)*
- Ø Salt Creek
- Ø Antelope Creek(P)
- Ø Craig Creek
- Ø Butler Slough
- Ø Dye Creek
- Ø Mill Creek(P)*
- Ø Dry Creek
- Ø Deer Creek(P)*
- Ø Pine Creek **

*Creeks for which a Watershed Conservancy has been formed.

**Pine Creek discharges into the Sacramento River in Butte County.

(P) Perennial Creek.

Runoff from watersheds on the west side is mostly influenced by precipitation as rain and, as a consequence, tends to be more “flashy” than runoff from streams on the east side, which are influenced to a greater extent by precipitation as snow. Nevertheless, storm runoff frequently exceeds the capacity of the stream channels. The result is widespread overland/sheet flow that floods numerous roads and mobile home parks thereby requiring the evacuation of people and moving mobile homes.

The flooding resulting from high tributary flow is exacerbated when it is coincident with high stages in the Sacramento River.

1.2 Purpose and Need

The State of California has proclaimed nine states of emergencies including Tehama County due to flooding since 1950 (Office of Emergency Services [OES], 1998). Major recorded floods occurred in December 1937, December 1955, December 1963, February 1986, January 1995, and January 1997, ranging from a 20-year to more than a 100-year storm event causing millions of dollars in property damage. Numerous road closures occur during these high runoff events, thereby isolating people and rendering access by ambulatory vehicles marginal at best.





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FEMA, now a part of the Department of Homeland Security, has targeted reducing losses from natural disasters as one of its primary goals. In Northern California, flooding and fire are major natural disasters; however, the Tehama County FMP deals with flooding only, except to the extent that fire can result in exacerbating flooding. Accordingly, the District initiated the preparation of this FMP to assess flood hazards and establish strategies to reduce flood hazards and repetitive losses within the County by accomplishing the following:

- Ø Providing a valuable planning document for use, continual update, and implementation through county programs to reduce threats to life and property and minimize repetitive losses.
- Ø Assembling and assessing flooding hazard information within the county's watersheds. The sources of this information include the FEMA Flood Insurance Rate Maps (FIRMs), available DSRs for one time and repetitive losses, local residents, agencies, organizations, and county staff.
- Ø Clarifying the fact that FEMA FIRMs do not necessarily reflect all the flooding hazards within the county, since they were mainly developed for flood insurance purposes and to guide the elevations of new development within the SFHAs.
- Ø Qualifying the county to benefit from mitigation projects funding under the Flood Mitigation Assistance (FMA) Program once this FMP is approved by FEMA.
- Ø Utilizing the information and analyses in this FMP to fulfill the flood element requirements of the Tehama County Local Hazard Mitigation Plan (LHMP). In 2001, FEMA promulgated hazard mitigation planning regulations pursuant to DMA 2000. Subsequent to November 1, 2004, FEMA requires a LHMP as a prerequisite to be eligible for hazard mitigation funding. (Detailed information about the DMA 2000 and the grants available under the program can be obtained from the FEMA Website:
<http://www.fema.gov/fima/dma2k.shtm>)
- Ø Qualifying the county to participate in FEMA's NFIP CRS Program, and allowing county residents to be eligible for flood insurance premium reductions. The CRS gives credit points for preparing and adopting a comprehensive floodplain management plan. Additional discussion and information about FEMA's CRS Program is available at FEMA's Website:
<http://www.fema.gov/nfip/crs.shtm>)





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- Ø Positioning the county to receive funding from the U.S. Army Corps of Engineers (USACE) for projects designed to reduce local flood damage. The USACE requires preparing a flood mitigation plan within one year of signing a project cooperation agreement and to implement the floodplain management plan no later than one year after the project is constructed. A floodplain management plan that is approved in the FEMA CRS Program is considered sufficient for being considered for funding by the USACE (USACE, 1997).





SECTION 2.0 – PLAN ADOPTION

The District, by resolution of its Board of Directors, is the entity to adopt the FMP. Presented in Appendix A is the form of the resolution that would be passed at the time the Board of Directors adopts the FMP. The general schedule for adopting the FMP is as noted below:

Review and comment of the draft FMP by the Steering Committee: August 19, 2006

Present Preliminary FMP to Board of Directors: August 22, 2006

Public meetings on the draft FMP: August 29, 2006 and August 31, 2006

Review and comment of the draft FMP by the public from August 28 through Sept. 15

Transmit FMP for review to FEMA/OES: October 20, 2006

Review and Respond to FEMA/OES Comments: (to be determined)

FMP Adoption by Board of Directors: (to be determined)





SECTION 3.0 – PLANNING PROCESS

3.1 Documentation of Planning Process

At the onset of the planning process, the District formed a Steering Committee with the purpose of:

- Ø Monitoring and coordinating the planning process.
- Ø Coordinating and providing input into the public involvement/meetings.
- Ø Providing data and information to develop the FMP.

The Steering Committee was formed with the following representatives:

Brandon Konicke	Tehama County Flood Control & Water Conservation District
Burt Bundy	Sacramento River Conservation Area Forum
Carolyn Steffan	City of Tehama
Dan Burns	California Department of Forestry and Fire Protection
Dave Hayward	Tehama County Public Works Department
Dennis Garton	Tehama County Sheriffs Department
Ernie Ohlin	Tehama County Flood Control & Water Conservation District
James Little	Tehama County Building & Safety Department
Jim Troehler	California Department of Forestry and Fire Protection/Tehama County Fire Department
Todd Hillaire	California Department of Water Resources

Subsequent to the planning process being initiated and the two public meetings, the following persons joined as representatives of the Steering Committee:

John Brewer	City of Corning
Steve Kimbrough	City of Corning





Consultant representatives on the Steering Committee:

Francis Borcalli, Wood Rodgers, Inc.
Muawieh (Mike) Radaideh, Wood Rodgers, Inc.

To ensure a meaningful public involvement process, the members of the Steering Committee drafted, reviewed, and finalized the schedule, location, and notices for two public meetings that were conducted early in the planning process and one that was conducted to receive comments on the draft FMP. Presented below is a summary of the planning process and public involvement:

- Ø Four meetings of the Steering Committee were conducted to discuss the elements of the FMP and hazards related to flooding within Tehama County, to plan the public meetings, and to review and comment on the draft FMP.
- Ø The public meetings were publicized through different media including spot announcements on Channel 12, the District's Website, and public information notices in local newspapers.
- Ø Two public meetings were organized and conducted to receive input on flooding and flood hazards. Input received from the meetings is summarized on Map 7. These meetings were held on:

January 19, 2006, Lassen View School in the Antelope-Dairyville Area

January 24, 2006, Veterans Hall in Corning

Copies of the PowerPoint presentations and sign-in sheets are included in Appendix B, along with a summary of written input received from meeting participants. Also enclosed is a copy of the notices that were distributed for the public meetings.

- Ø As a follow up to the public meetings and in response to concerns expressed at the meetings, one-on-one field reconnaissance visits were conducted in the Dairyville and Corning areas affected by Jewett and Burch Creeks.
- Ø Presentation of the draft FMP to the Board of Directors of the Tehama County Flood Control and Water Conservation District the Tehama County Board of Supervisors was made on August 22, 2006.





- Ø Public meetings to present draft FMP and to receive comments were held on:

August 29, 2006: Lassen View School in the Antelope-Dairyville Area

August 31, 2006: Veterans Hall in Corning

Copies of the PowerPoint presentations and sign-in sheets are included in Appendix B, together with comments received at the meeting.

3.2 Local Capabilities Assessment

By virtue of an act of the State Legislature in 1957, together with amendments, the District has broad authority to perform and to collect fees and assessments to plan, design, construct, maintain, and operate facilities to minimize the risks associated with flood and storm waters. A copy of the act is included in Appendix C. By Resolution No. 7-1995, the District established a policy for repair of damaged levees and stream bank repair projects. A copy of this resolution is included in Appendix D. The District does, however, maintain federal levees along Salt and McClure Creeks (Map 8), clean creeks as a public service, and coordinate its activities with other local agencies and state and federal agencies to facilitate planning and investigative work as well as maintenance work. The District has been very active in working with FEMA and OES to address post-disaster repairs and remediation; however, there is insufficient funding to address pre-disaster planning and mitigation projects.

Technical and Human Resources

The principal local, state, and federal agencies that the District coordinates activities with to broaden the base of technical and human resources to plan hazard mitigation projects, provide flood fighting assistance, and minimize flood risks include the following:

Local Agencies

Tehama County Planning and Safety Department
Tehama County Public Works Department
Tehama County Resource Conservation District
Tehama County Sheriffs Department
Vina Resource Conservation District

State Agencies

California Department of Forestry and Fire Protection
California Department of Water Resources
California Office of Emergency Services





Federal Agencies

Federal Emergency Management Agency
U.S. Department of Agriculture, Natural Resource Conservation Service
U.S. Army Corps of Engineers

Financial Resources

Budgetary constraints have limited the availability of funding for various floodplain management, mitigation, and preparedness activities. However, this FMP and the Tehama County LHMP, which is anticipated to be developed soon, establishes eligibility for funding under several programs, including FEMA's Pre-Disaster Mitigation (PDM) Program, the FMA Program, the Hazard Mitigation Grant Program (HMGP), the Public Assistance (PA) Program, the California Resources Agency's Urban Streams Restoration Program, and the Natural Resources Conservation Service (NRCS) EWP Program. Presented below is a brief description of each program.

PDM Program – Authorized by DMA 2000, this program can provide funding to states, public agencies, communities, and tribes for cost-effective hazard mitigation planning activities that complement a comprehensive mitigation program and reduce injuries, loss of life, and property.

FMA Program – Provides funding to assist states and communities in implementing measures to reduce or eliminate the long-term risk of flood damage to buildings, manufactured homes, and other insurable structures. The three types of grants available through the FMA Program are planning, project, and technical assistance grants. Only communities that participate in the NFIP can apply for project and technical assistance grants. Planning grants are available to states and communities that prepare flood mitigation plans.

HMGP – Provides grants to local, state, and tribal governments to implement long-term hazard mitigation measures after a major disaster declaration (up to 15 percent of the FEMA disaster funds they receive is for hazard mitigation planning and projects).

PA Program – Provides funding, following a disaster declaration, for repairing, restoring, or replacing damaged facilities belonging to governments and to private nonprofit entities, and for other associated expenses, including emergency protective measures and debris removal. The program also funds mitigation measures related to repairing damaged public facilities.

Urban Streams Restoration Program – Supports activities that minimize property damage caused by flooding and bank erosion, restores the natural value of streams, and promotes community stewardship. This program funds projects that have flood management or erosion control as a primary objective, and maintains or improves the environmental characteristics of a stream or restores a stream to function naturally.





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NRCS EWP – Assists sponsors and individuals in implementing emergency measures to relieve imminent hazards to life and property created by a natural disaster. Activities include providing financial and technical assistance to remove debris from streams, protecting destabilized stream banks, establishing cover on critically eroding lands, implementing conservation practices, and purchasing floodplain easements. The program is designed for recovery measures, and it is not necessary for a national emergency to be declared for an area to be eligible for assistance.

Regulatory

Tehama County adopted Floodplain Management Regulations (Code Chapter 15.52) effective July 1, 1999 (Appendix E). These regulations are administered by the Tehama County Building and Safety Department. The purpose of the regulations is to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas. The methods and provisions of reducing flood losses through the regulations include the following:

- Ø Restrict or prohibit uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or flood heights or velocities.
- Ø Require that uses vulnerable to floods, including facilities that serve such uses, be protected against flood damage at the time of initial construction.
- Ø Control the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel flood waters.
- Ø Control filling, grading, dredging, and other development that may increase flood damage.
- Ø Prevent or regulate the construction of flood barriers that unnaturally divert floodwaters or that may increase flood hazards in other areas.





SECTION 4.0 – RISK ASSESSMENT

4.1 Hazard Identification

Tehama County is subject to a variety of natural hazards and from 1950 to 1997, it has been included in 19 states of emergency as proclaimed by the State of California. Of the 19 emergencies, nine were related to flooding (four were within 15 years), five were related to storms, three were related to wildland fires, and two were related to drought.



For purposes of this FMP, the flood-related hazards are addressed; however, it is recognized that wildland fires within a watershed can exacerbate the flood hazard by virtue of increased rate and volume of runoff and attendant erosion and sediment discharge.

With respect to identifying flood hazards, the majority of the areas mapped on the FEMA FIRMs are shown as having no BFE mapped (Map 8). Also shown on Map 8 are areas that have been mapped from “approximate studies” performed by DWR. The potential floodplain associated with a catastrophic failure of Shasta Dam is shown on Map 9.

With respect to the floodplain delineated along the Sacramento River, it is important to note that the results of the work completed by DWR in February 2002 for the Sacramento and San Joaquin River Basins Comprehensive Study (Comp Study) show a broader floodplain in Tehama County than the FEMA FIRMs in some areas. The areas where the 100-year floodplain is less than that shown on the floodplain maps developed for the Comp Study are presented on Map 10. The areas where the 100-year floodplain is greater include Antelope, Dye Creek, Los Molinos, and Vina. The assessed values of the improvements within these areas are presented on Table 1, and on Map 11. This information is presented to provide an order of magnitude of the value of property improvements within the affected areas. The basis for the hydrologic modeling was different in the respective studies; nevertheless, the difference needs to be understood to determine which of the two 100-year floodplains should be adopted for administering the NFIP. The FEMA FIRMs are the current regulatory maps; however, the “best” available information could be used as well.

The available documentation of the hazard associated with flooding is best captured in DSRs filed in years of disasters declared by the state and federal governments, and in claims processed under policies administered through the NFIP. The DSRs account for the repair of damage related to public works such as roads, bridges, channels, etc. The claims processed under the NFIP account for repairs to residential, commercial, industrial, or agricultural buildings. It was indicated by county officials that several





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residences and structures sustained flood damage; however, the damage is not documented since the cost of the repairs was paid by the owners.

Presented on Table 2 is a summary of the DSRs for which flood damage repairs were implemented in 1993, 1995, 1997, and 1998. The general geographic location and distribution of the DSRs is shown on Map 12. The DSRs, in relation to the FEMA SFHAs, are shown on Map 13. The funding for repair of the damages related to public property was provided by FEMA, whereas the funding for repair of damage to private property has been handled largely through the NRCS.

Presented on Table 3 is a summary of the total claims or losses and repetitive losses administered through the NFIP. Repetitive losses are losses that have accrued to the same property within a 10-year period. Presented on Table 4 is a breakdown of the repetitive losses. The general geographic location and distribution of the claims paid under the NFIP for repetitive losses are presented on Map 14. All claims are regarded as repetitive loss properties in that they have encountered multiple claims ranging from two to as many as seven events. As shown on Table 4, the average payment per claim for the respective losses ranges from about \$3,600 to \$14,500, with the countywide average being approximately \$12,500 per claim. Additionally, there have been 52 single event claims paid by FEMA since October 1, 1995 that amount to approximately \$370,000 as shown on Table 5. These single event claims have the potential of becoming repetitive losses if measures are not implemented to mitigate the hazard. These single event claims are located on Map 14 generally.

An important aspect of both the DSRs and claims under the NFIP is that a large number of the events are outside areas designated as a flood hazard zone on the current FIRMS prepared by FEMA. This situation is illustrated on Map 13, although it is worthy to note that the information related to the location of NFIP claims is approximate.

It is important to highlight the fact that the majority of the claims thus far are not regarded as repetitive. In view of the conditions in Tehama County, it is highly likely that a significant number of the single-event claims could become a repetitive loss in a future storm event.

As noted previously, overland and sheet flooding is widespread causing flood damage in areas that are not currently mapped as floodplains. At the same time, road flooding and closures are widespread as well. Shown on Map 15 are county roads that flood frequently.





4.2 Profiling Hazards

Critical facilities, as identified by FEMA and presented in its HAZUS Database, are shown on Map 16. Located on the back of Map 16 are the names and locations of the respective facilities. Inspection of the critical facilities in relation to the FEMA SFHAs indicates that most critical facilities are outside the delineated zones, except for historic features, parks, and hazardous material sites. In summary, the hazards are best profiled by the information compiled for DSRs and NFIP claims, as discussed above. A greater hazard is likely associated with potential risks that could be encountered unless the basic land use “tools” are developed.

4.3 Vulnerability Assessment

Overview

Vulnerability with respect to flooding is the primary consideration for this FMP. For this assessment the baseline information utilized included:

- Ø Critical facilities inventory.
- Ø Repetitive loss data.
- Ø Assessor’s data.
- Ø Development trends.

Critical Facilities Inventory

Critical facilities as defined by FEMA include the following:

- Ø Essential Facilities – Medical care facilities, emergency response facilities, schools, shelters, and any facility vital to emergency response and recovery following a disaster.
- Ø Transportation Lifeline Systems – Highways, railways, light rail, bus systems, ports, ferry systems, and airports.
- Ø Utility Lifeline Systems – Potable water, electric power, wastewater, communications, and liquid fuels.
- Ø Hazardous Materials Facilities – Facilities housing industrial/hazardous materials, such as corrosives, flammable materials, radioactive materials, and toxins.

Facilities that are considered high potential loss facilities such as dams, natural gas facilities, and large unique residential or commercial structures were not considered for





potential loss estimation in the FMP. As noted previously, a list of the critical facilities with an identification number that corresponds to a location is presented on Map 16.

Potential Losses – Residential, Commercial, and Critical Facilities

As indicated in an earlier section there are damages incurred on structures that are not within a mapped flood hazard zone. Accordingly, for purposes of estimating potential losses, information was compiled for structures within the mapped floodplain as well as outside the mapped floodplain for the reason stated. For areas outside of a mapped floodplain, an area was circumscribed based upon information obtained from the public meetings, the mapping of NFIP claims, and visual observations in the field. These areas are identified on Map 14.



The approach utilized in valuing the potential losses involved the following steps:

1. Obtaining the assessed value of all residential, commercial, and industrial structures or improvements within respective geographic areas both within and outside the mapped floodplains.
2. Identifying critical facilities located in the mapped flood hazard areas.
3. Determining the potential loss amounts for the structures identified in items 1 and 2 above for depths of flooding of one and two feet using FEMA parameters.
4. Calculating the potential flood loss using the information obtained in items 1, 2, and 3 above.

Presented on Table 6 is the value for the improvements located within the mapped floodplain. In addition, the potential damage to the improvements and contents were estimated using U.S Army Corps of Engineers flood depth-damage relationships. This was done for flood depths of one and two feet above finished floor. Also, recognizing that the area contains agricultural land, the values for land within the Williamson Act was removed, and the results are presented in Table 7.

Potential Losses – Future Development

Based upon the Tehama County Draft Housing Element, the population of Tehama County is projected to grow from 58,175 in 2004 to 68,323 in 2020, representing an overall increase of approximately 17 percent over the 17-year period. The population in





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the unincorporated area represented about 65 percent of the total county population and is projected to grow from a population of 37,865 in 2004, to 47,298 in 2020. This represents an increase of about 25 percent and approximately 69 percent of the total county population. It is recognized that these forecasts of population growth can be altered substantially through the proposed Del Webb Sun City Tehama and the proposed Morgan Ranch developments. The Bowman area in the north part of the county and the Antelope area east of Red Bluff are the most populous areas. The Bowman area along with the Gerber and Los Molinos areas reportedly represent the fastest growing areas in the county.

Information received from the public meetings reflected existing and potential problems related to flooding in the Antelope-Dairyville area and the area south and adjacent to the



city of Corning. The data documenting claims under the NFIP confirms existing problems in the Antelope-Dairyville area; however, it does not reflect existing problems in the south Corning area. The FIRMs for the south Corning area do show a significant floodplain; however, photographs taken by residents show the flooding to be of a much greater extent than what is shown on the FIRMs. Accordingly, planning for development or building structures within the south Corning area is somewhat

problematic in view of the apparent discrepancy between the FIRMs and observed flooding, and a difference of about one foot in the BFE between the FIRM for the city in relation to the FIRM for the county at the city along its south boundary.

Based upon the information presented in the Tehama County Housing Element, the majority of the population growth in the county through 2020 is anticipated to occur in the unincorporated areas. Using the historic figures of approximately 2.3 people per housing unit indicates that by 2020 an additional 4,000 housing units would be constructed in the unincorporated area of the county. This represents a 25 percent increase in the number of residential units and does not reflect new commercial buildings that would undoubtedly accompany the population growth.

Tehama County is currently updating its General Plan; however, it appears that the update of the General Plan will not address or develop policies related to storm drainage and flooding or flood risk reduction. Thus, the process for permitting and constructing new structures will continue without the benefit of any guidelines or criteria to achieve consistency with time and to facilitate addressing the cumulative impact of building and development.





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In view of the situation and conditions related to accommodating the increase in population projected for the unincorporated area of the county and the uncertainty in relation to time and location, no estimate is made of potential losses associated with future development. However, the risk will increase within the respective flood hazard mitigation areas identified for this FMP, unless data and information is developed to facilitate sound decisions for future building.





SECTION 5.0 – MITIGATION STRATEGY

An effective mitigation strategy must involve the communities working as a partnership with common goals, objectives, and criteria or standards. Within Tehama County there are three incorporated communities (Corning, Red Bluff, and Tehama) and several unincorporated communities or areas (Antelope-Dairyville, Gerber, Los Molinos, and Vina). Although the county and respective incorporated communities could pursue flood hazard mitigation on their own, the benefits of a collaborative effort would be more effective. Additionally, consistency in the criteria and methodology employed would be enhanced and prove to be beneficial for the residents.

Administering the NFIP in a manner that protects existing and future residents and property is extremely difficult at both the county and city levels of government if adequate information is not available. Accordingly, the overall strategy for mitigating flood-related risks is to develop the “tools” necessary to facilitate planning and permitting development whether it is a single structure or subdivision consistent with adopted floodplain management regulations. More importantly, flood-related damages are experienced in areas that are not designated as a flood hazard area, thus compromising the security of future development.



As the population of Tehama County grows, it becomes more important to take steps to inform new residents as well as existing residents of flood hazard related risks.

5.1 Hazard Mitigation Goals

Hazard mitigation goals were identified based upon comments received at the public meetings on January 19 and January 24, 2006, from follow-up field reconnaissance of flood prone areas, and from discussions among the Steering Committee. Embedded in these goals and objectives is a philosophy of “no adverse impact” toward floodplain management. The following goals and objectives provide the general direction for identifying actions to mitigate existing and future flood hazard related losses.

Goal 1: Prevent Future Flood Hazard Related Losses of Life and Property

Objective 1.1 – Minimize or eliminate losses to repetitive loss properties.

Objective 1.2 – Prevent future development or buildings within or outside a SFHA from incurring flood hazard related losses.





Objective 1.3 – Prevent future development or buildings from causing flood hazard related losses to other properties.

Objective 1.4 – Enhance interagency coordination.

Goal 2: Increase Public Awareness to Flood Hazard Related Risks

Objective 2.1 – Establish and implement a flood hazard outreach program.

Goal 3: Improve Emergency Services and Response Capability

Objective 3.1 – Develop an early warning and flood alert system.

Goal 4: Participate in FEMA’s CRS Program

Objective 4.1 – Monitor Mitigation Plan Implementation and seek participation in the Community Rating System Program.

5.2 Identification and Analysis of Mitigation Actions

This FMP will establish eligibility and a mechanism for the District to seek mitigation funding through the established programs. The actions identified for the FMP will be rated in relation to criteria established by the state to prioritize mitigation activities for funding. This criteria is as follows:

- Ø Percent of population at risk
- Ø Frequency and likelihood of hazard
- Ø Repetitive loss areas
- Ø Small/impoverished communities
- Ø Planning resources available
- Ø Types/percent of land areas at risk
- Ø Development pressure rating
- Ø Project urgency and C/B analysis
- Ø Cost-effectiveness of measure

The application of these criteria will be through an assignment of low, medium, and high priority. In view of the state of conditions in Tehama County and the type and extent of the flood hazards, certain actions are regarded as “foundational” actions as they are a prerequisite to other actions.

5.3 Implementation of Mitigation Actions

Actions have been identified consistent with the FMP goals and objectives to reduce the flood hazard related risks to people, property, and infrastructure.





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Formulation of Actions

An Action Program has been formulated to address the FMP goals and objectives. Listed on the following page are the respective actions that are recommended for implementation to mitigate the adverse impacts from flooding in Tehama County. A description of each action is provided on subsequent pages.





ACTION PROGRAM

- Action No. 1 Formulate Design Criteria and Standards to Handle Storm Runoff Quantity and Quality
- Action No. 2 Prepare Topographic Mapping of the Valley Area of Tehama County
- Action No. 3 Review, Update, and Implement Existing and/or New Ordinances
- Action No. 4 Perform a Detailed Floodplain Analysis to Determine Drainage Patterns, the Extent and Cause of Flooding, and to the Establish BFE to Administer the NFIP and Floodplain Management Regulations
- Action No. 5 Formulate and Implement an “Elevation” Project to Identify Homes and Structures that Should be Elevated and Homeowners that Would be Interested in Participating in the Project
- Action No. 6 Determine the 100-Year Floodplain Along the Sacramento River to be Used for the NFIP – FEMA FIRM vs. USACE Comprehensive Study
- Action No. 7 Formulate and Implement Invasive Plant Species Removal and Maintenance Program
- Action No. 8 Formulate a Flood Hazard Mitigation Plan and Perform a Feasibility Study
- Action No. 9 Formulate a Flood Management Plan for Jewett and Burch Creeks in the Vicinity of Corning
- Action No. 10 Investigate and Implement Debris Management at Bridges
- Action No. 11 Establish a Flood Hazard Mitigation Coordinating Committee (FHMCC)
- Action No. 12 Formulate and Implement a Flood Hazard Public Outreach Program
- Action No. 13 Develop an Early Warning and Flood Alert System





**Action No. 1 Formulate Design Criteria and Standards to Handle Storm Runoff
Quantity and Quality**

Priority High.

Background There is a lack of detailed information regarding existing drainage patterns and floodplains in areas of existing development and, in most cases, areas where future development will likely occur. As a consequence, implementation of a “no adverse impact” management policy is problematic. Even where FEMA has identified SFHAs, the BFE’s are not always available. In order for the administrators of the NFIP and county/city building departments to discharge their duties responsibly, it is important that the basis for design of infrastructure for storm runoff be consistent throughout the county in both the incorporated and unincorporated areas. Furthermore, it is important that the jurisdictional entities provide the basis for design and standards to the public to achieve consistency throughout the community over time rather than reviewing material offered by the development community whether it is for a single structure or several structures.

Lead and Cooperating Agencies The Tehama County Flood & Water Conservation District in cooperation with the Tehama County Building and Safety Department and the Planning and Public Works Departments of county and cities.

Estimated Cost The cost to develop design criteria for handling storm runoff in terms of both quantity and quality is estimated to cost \$50,000.

Benefit Consistency in directing future improvements of adequate capacity and configuration throughout the community.

Potential Funding PDM, FMA.

Schedule Within one year.





Action No. 2 Prepare Topographic Mapping of the Tehama County Valley Area

Priority High.

Background A significant number of the DSRs and NFIP claims are outside of FEMA-designated SFHAs. The determination of the causes of flooding on existing structures and the siting of new facilities, so as not to be adversely impacted by flooding or adversely impacting adjacent or neighboring properties, is problematic due to the lack of topographic data and mapping. Detailed topographic mapping is a prerequisite to implementing several of the actions recommended in this FMP. Accordingly, it is recommended that the central portion of Tehama County be mapped to provide the foundational information for administering the NFIP and for the review of improvement plans and issuing building permits. It is deemed to be more cost-effective to provide the continuity in the mapping throughout the central area of the county rather than for a number of site-specific areas. The utility afforded by this information will be extremely beneficial to the county and its citizens. The mapping should be developed with a minimum specification for a 2-foot contour interval.

Lead and Cooperating Agencies The Tehama County Flood Control & Water Conservation District should take the lead; however, this should be a collaborative activity with Tehama County and the cities with participation by the Tehama County Resource Conservation District (RCD) and watershed groups.

Estimated Cost \$300,000.

Benefit It will facilitate sound planning and evaluation of measures to mitigate existing flood hazards and avoid creating new flood hazards in the future.

Potential Funding PDM, FMA.

Schedule Completed in 2007.





Action No. 3 Review, Update, and Implement Existing and/or New Ordinances

Priority High.

Background A significant number of NFIP claims are associated with properties that are not included in the FEMA SFHAs. Placing fill, constructing levees or berms, modifying drainage channels and streams, constructing and maintaining private and public roads, and grading property without regard or the understanding of the potential impact to drainage or the risk from flooding can be exacerbated or in some cases can create problems where none existed previously. With the anticipated increase in population in the unincorporated area of the county there is the potential for increasing the extent of flood-related risks unless the means and methods for preventing such occurrences are available. The benefits from implementing actions to mitigate or avoid flood-related risks can be minimized or negated. It is critical to perform a comprehensive review of existing ordinances and to update, modify, or adopt a new ordinance to be used with the information provided by implementing other actions in order to have the “tools” necessary to minimize the potential to adversely impact storm runoff in the future. Absent some means of regulating changes in grading, filling, etc. the investment made to correct or prevent risks may be negated. In essence, this action becomes a prerequisite to investment in several other actions.

Lead and Cooperating Agencies Tehama County Public Works Department as the lead agency in cooperation with the Tehama County Building and Safety Department, the Tehama County Flood Control & Water Conservation District, and the Agricultural Commissioners Office.

Estimated Cost \$25,000.

Benefit Minimize the opportunity for future construction, maintenance, and grading to create new or adversely impact existing flood-related risks.

Potential Funding In-house personnel costs.

Schedule One to two years once the information available from other FMP actions is available to facilitate implementation of the ordinance.





Action No. 4 Perform a Detailed Floodplain Analysis to Determine Drainage Patterns, the Extent and Cause of Flooding, and to the Establish BFEs to Administer the NFIP and Floodplain Management Regulations

Priority The priority for addressing the respective areas under this action is as follows:

- Ø Antelope (High)
- Ø Dairyville (High)
- Ø Gerber (Medium)
- Ø Los Molinos (Medium)
- Ø Corning (Jewett, Burch). See Action Item No. 8 (High)

Background Referring to Table 3, there are a total of 37 documented repetitive loss properties in Tehama County that range from two incidents up to seven. In addition, there are 217 documented claims that are not repetitive losses at this time; however, there is no evidence available to suggest that these properties may not become a repetitive loss property in the future. These respective properties appear to be spread throughout the county with some incidences occurring in specific geographic areas. From a review of the data, four areas were delineated for special consideration from the standpoint of mitigating documented problems and avoiding new properties from being impacted. These areas, identified as Antelope, Dairyville, Los Molinos, and Corning, are shown on Map 17 along with the value of property within the respective areas based upon Assessor parcel data. In addition, the Gerber area is afforded some protection by levees; however, its internal drainage system appears deficient and warrants investigation. The Corning area is included in the development of a flood management plan for Jewett and Burch Creeks in Action No. 8. The City of Tehama contributed 50 percent toward a detailed study to determine structure specific elevations for flood mitigation purposes. As shown on Map 12, certain repetitive loss properties are in mapped flood hazard zones whereas others are not. The Dairyville area is an example where several repetitive loss properties are not within a mapped flood zone.

Based upon information presented during a field reconnaissance of the Dairyville and Corning areas, it appears there are properties in the general area that have sustained flood damage; however, they were not covered under the NFIP. Therefore, the owner paid for the repairs. Most of the areas are encountering some increase in residences being constructed, the most notably being the Antelope/Dairyville areas.

As noted earlier in this report, a significant amount of the projected increase in population in Tehama County is expected to occur in the unincorporated areas of the county. The unincorporated areas of the county are also where the greatest amount of flood damage has occurred, and account for 65 percent of the total losses and 82 percent of the repetitive losses claimed under the NFIP.





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The prospects for the amount of losses to increase are high under present conditions as the information required to properly advise citizens and to administer sound regulations or policies is seriously lacking. The county and cities do not have consistent design criteria or standards to address storm runoff and as a consequence Action No. 1 is very important and is a prerequisite to performing Action No. 4. Performing the analyses will require detailed topographic mapping in accordance with Action No. 2, and potential supplemental surveys along with hydrologic and hydraulic modeling using parameters set forth in the design criteria. This work product is also a prerequisite to Action No. 8. An important part of this work will be to inventory privately-owned levees and evaluate their relative importance in managing flooding in the respective areas.

Lead and Cooperating Agencies

The Tehama County Flood Control & Water Conservation District in cooperation with the Planning, Building and Safety, and Public Works Departments of the cities.

Estimated Cost

The estimated cost for performing the detailed analyses for the respective areas assumes that the topographic information from Action No. 2 is available. The estimated costs for the respective areas assume some additional field surveys would be required for determining the geometry of creeks and channels.

- Ø Antelope (\$300,000)
- Ø Dairyville (\$300,000)
- Ø Gerber (\$75,000)
- Ø Los Molinos (\$200,000)

Benefit

Provides foundational information for administering the NFIP and floodplain management regulations and facilitates mitigating existing and potential repetitive losses, which could be substantial if the current process is not interrupted.

Potential Funding

PDM, FMA, Urban Streams Restoration Program.

Schedule

- Ø Antelope and Dairyville area within three years.
- Ø Gerber area within five years.
- Ø Los Molinos area within five to eight years.





Action No. 5 Formulate and Implement an “Elevation” Project to Identify Homes and Structures that Should be Elevated and Homeowners that Would be Interested in Participating in the Project

Priority The priorities would be the same as identified for the respective areas in Action No. 2.

Background The greatest concentration of repetitive-loss properties is within the city of Tehama; however, this community is currently involved in an “elevation” project sponsored by the USACE and State Reclamation Board. Within the city there were about 125 houses below the USACE 100-year BFE for the Sacramento River. Thirty six houses have been elevated; it remains uncertain as to how many additional structures will be elevated. The depth of flooding and local ordinance require that the finished floor be at least two feet above the 100-year BFE. The cost to elevate homes in the city has ranged from \$60,000 to \$100,000. By comparison, the elevation of homes in areas subject to shallow flooding (one to two feet) reportedly cost approximately \$50,000 to \$60,000. The amount of cost-sharing to be provided by the local sponsor is 35 percent and the homeowner would be responsible for 10.5 percent of the 35 percent. The State Reclamation Board has been the sponsor in most projects.

The information developed from Action No. 2 will facilitate formulation of an “elevation” project.

Lead and Cooperating Agencies

The Tehama County Flood Control & Water Conservation District in cooperation with the Planning and Public Works Departments of the county and cities.

Estimated Cost The initial cost to formulate the guidelines and criteria for the project is estimated at \$25,000, plus \$25,000 to address each of the five hazard mitigation areas as the detailed information is prepared and available from Action No. 2. The cost to implement the “elevation” project will be approximately \$50,000 to \$60,000 per structure with approximately 35 percent paid by the homeowner.

Benefit Reduction in property loss.

Potential Funding PDM, HMGP.

Schedule Within three years of developing the detailed floodplain analyses for the respective areas.





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Action No. 6 Determine the 100-Year Floodplain Along the Sacramento River to be Used for the NFIP – FEMA FIRM vs. USACE Comprehensive Study

Priority This action is important; however, it is regarded of medium priority in relation to other actions.

Background The 100-year floodplain along the Sacramento River that has been delineated by the USACE, based upon its Comprehensive Study of the Sacramento and San Joaquin Rivers, is broader than that delineated on the FEMA FIRMs. The differences and the reasons for the differences between these maps and any other 100-year flood stage designations should be reviewed in order that Tehama County, in administering the NFIP, can be certain the new information can and should be used as the “best available” information. The County should conduct a workshop with FEMA, the USACE, the State Reclamation Board, and DWR to address this matter.

Lead and Coordinating Agencies Tehama County Building and Safety Department in coordination with the County Planning Department; the cities of Corning, Red Bluff, and Tehama; DWR, the State Reclamation Board, USACE, and FEMA.

Estimated Cost The cost to research and review the documentation for the respective work products and formulate a recommendation for consideration by Tehama County is approximately \$25,000.

Benefit More appropriate communication of the flood-related risks and administration of the NFIP.

Potential Funding FMA.

Schedule Within two years.





Action No. 7 Formulate and Implement an Invasive Plant Species Removal and Maintenance Program

Priority High.

Background Invasive plant species such as *Arundo* and *Tamarisk* are widespread throughout the Sacramento Valley including several streams in Tehama County. The RCD has experience in removing *Arundo* and other non-native species and pursues funding on an ongoing basis. The establishment of *Arundo* in the streams in Tehama County has seriously limited their conveyance capacity. Although the RCD has done some field identification of invasive plant species, it would be appropriate to complete and inventory the extent and location of the invasive plants and develop a GIS based inventory that could be utilized to prepare a prioritized list of projects. Once the plants are removed, an ongoing program would be required for maintenance to control the reemergence of the species.

Lead and Cooperating Agencies The Tehama County Resource Conservation District in coordination with the Tehama County Flood Control & Water Conservation District, cities, and Agricultural Commissioners Office.

Estimated Cost Approximately \$20,000 to complete the preparation of an inventory of streams to which *Arundo* or other invasive species have seriously impacted the hydraulic capacity of the channels, and then to prioritize the streams for purposes of mitigating the flood capacity reduction. Approximately \$50,000 per year would be needed for plant removal for five years, and \$10,000 per year for maintenance thereafter.

Benefit Restore the hydraulic conveyance capacity of streams in Tehama County and significantly reduce the supply of debris that collects at hydraulic structures, which reduces their capacity during high runoff events.

Potential Funding State Water Resources Control Board, FMA, PDM.

Schedule Complete the inventory in 2007 and initiate program for plant removal in 2008.





Action No. 8 Formulate a Flood Hazard Mitigation Plan and Perform a Feasibility Study

Priority High

Background As noted under Action No. 4, in the Antelope-Dairyville area there are single event and repetitive loss properties within and outside the FEMA SFHAs. The NRCS, in its Technical Report dated September 2005, notes that property damage in the area resulted from extreme rainfall events in 1937, 1940, 1958, 1983, 1986, 1995, and 1997. The updated models to support floodplain mapping recommended under Action No. 4 will facilitate identifying existing flood hazards and provide the foundational information to determine the effectiveness of alternative hazard mitigation to alleviate existing as well as future flooding.

A flood hazard mitigation plan is to be prepared with a preferred alternative or alternatives identified. Once the alternative or alternatives are identified a detailed feasibility study should be performed. Depending upon the results of the feasibility study and the magnitude of the mitigation measures and the relative benefits, sources of funding should be identified and pursued for implementation of the most effective measures.

Lead and Cooperating Agencies

The Tehama County Flood Control & Water Conservation District in cooperation with the County Planning, Building and Safety, and Public Works Departments, DWR, Caltrans, and FEMA.

Estimated Cost The estimated cost for preparing a flood hazard mitigation plan and a detailed feasibility study for the Antelope-Dairyville area assumes the topographic information from Action No. 2 is available as well as the results of the detailed floodplain mapping described in Action No. 4. Accordingly, the estimated cost to complete this action is \$200,000 and assumes some supplemental field surveys will be required.

Benefit The results of this action will provide Tehama County and its residents with information that can be used to pursue funding for construction and maintenance through a variety of programs including the formation of an assessment district at least for the maintenance. Equally important is that it provides information for administering the NFIP and floodplain management regulations and facilities mitigating existing and future repetitive losses.

Potential Funding PDM, FMA, Urban Streams Restoration Program, Assessment District.

Schedule Within two to five years depending upon the completion of Action No. 2 and Action No. 4.





Action No. 9 Formulate a Flood Management Plan for Jewett and Burch Creeks in the Vicinity of Corning

Priority High

Background Widespread flooding has been experienced in the southern part of the city and adjacent land outside the city due to a combination of factors ranging from significant restrictions in the channel capacity resulting from invasive plants, to inadequate capacity of road and railroad crossings. This is an area where significant interest is being expressed for development and the information by which to assess development proposals is inadequate and implementing a “no adverse impact” policy is problematic. There are discrepancies in the FIRMs at the boundary between the incorporated area and unincorporated areas thereby complicating the administration of the NFIP and responsible planning. Known repetitive losses are currently low; however, the risk for these to increase is high because of the deficiencies in the available information. DSRs related to repairing public infrastructure are widespread particularly in the storm events of 1995 and 1998. The repairs associated with these events are in the order of \$90,000. Accordingly, the formulation of a flood management plan for both Jewett and Burch Creeks is recommended so that a comprehensive evaluation can be made of the constraints and opportunities for managing floodwater from the watersheds. The consideration of detention storage and other flood management facilities was first investigated in 1969 by the California Department of Conservation. Although nothing materialized from that effort, the concept could offer opportunity to mitigate damage to public infrastructure and provide floodplain information to facilitate sound land use planning and a basis for administering the NFIP for the area.

Lead and Cooperating Agencies A collaborative effort on the part of the Tehama County Flood Control & Water Conservation District and the city of Corning.

Estimated Costs Approximately \$300,000 including the cost to develop detailed topographic mapping and surveys of Jewett and Burch Creeks, augment the topographic mapping included in Action No. 2, update hydrologic and hydraulic analyses, update mapping of the existing floodplains, and perform preliminary engineering designs and cost estimates. This work would be performed consistent with the criteria developed from Action No. 1.

Benefit Provides foundational information for land use planning and floodplain management and guidance toward mitigating repetitive damage to public infrastructure.

Potential Funding PDM, FMA, Urban Streams Restoration Program.

Schedule Within two years.





Action No. 10 Investigate and Implement Debris Management at Bridges

Priority High.

Background During periods of high runoff, the lodging of debris on bridge or culvert piers can and does seriously reduce their hydraulic capacity and at bridges can exacerbate scour in the streambed. Residents in the vicinity of the various streams and personnel from the County Public Works Department and Caltrans have a very good understanding of the structures that are most prone to adversely impact property and transportation routes as a result of blockage by debris on the piers. This knowledge base provides a valuable resource from which to inventory and prioritize bridges and culverts from the standpoint of hazards or adverse impacts.

Various technologies are available that can be retrofit to existing structures to alleviate or minimize the buildup of debris on bridge piers. To the extent they can prove to be successful in Tehama County, they can be a cost-effective way of maintaining hydraulic capacity when needed the most and also to minimize maintenance costs.

The work to be performed under this action is to inventory and prioritize the bridges and culverts that have one or more sets of piers and are adversely impacted by debris during high runoff events. For the top two structures, implement one or more applicable technologies to determine the effectiveness of such installations. Pending the results from this action, the program could be expanded.

Lead and Cooperating Agencies

Tehama County Public Works Department in cooperation with the Tehama County Flood Control & Water Conservation District and Caltrans.

Estimated Cost The inventory and prioritization of the bridges and culverts would be performed by Tehama County personnel and the systems to retrofit to the existing structures (2) are estimated to cost approximately \$40,000.

Benefit If the systems are effective, significant benefits would accrue from the standpoint of maintaining hydraulic capacity when it is needed most and would reduce the cost and burden on maintenance personnel when resources are limited.

Potential Funding In-house personnel for the investigative work and PDM, FMA, and Caltrans.

Schedule Within two years.





Action No. 11 Establish a Flood Hazard Mitigation Coordination Committee

Priority High.

Background The activities of the Steering Committee established for preparing the FMP illustrated the value and utility of communication on the subject of flood-related risks. This communication does not necessarily have to be frequent; however, it should be accomplished on a regular basis and at an interval so that the aspect of flood hazard mitigation becomes common in both thought and function for the respective committee members. Accordingly, transitioning the Steering Committee to a FHMCC is recommended. At a later date this Committee could transition to a Multi-Hazard Mitigation Coordination Committee.

An important function of the FHMCC would be to oversee the implementation and maintenance of this FMP.

Lead and
Cooperating
Agencies

The Tehama County Flood Control & Water Conservation District as the lead agency along with the cities of Corning, Red Bluff, and Tehama; Sheriffs Department; the Tehama County Building and Safety and Planning Departments; the Tehama County Resource Conservation District; State OES; and the California Departments of Fish and Game, Forestry, and Water Resources; Caltrans; and Watershed Groups.

Estimated Cost In-house personnel cost.

Benefit Developing and maintaining a core group of individuals that are informed of the FMP on an ongoing and regular basis.

Potential
Funding Agency budget process.

Schedule Within 2007.





Action No. 12 Formulate and Implement a Flood Hazard Public Outreach Program

Priority High.

Background The successful implementation of projects, programs, and policies related to mitigating or avoiding flood-related risks is best accomplished with an informed public. The regular activities of the recommended FHMCC (Action No. 11) can be an effective part of a deliberate public outreach program. This can be accomplished through regular meetings of the committee with noticed agendas and meeting notes, and maintaining a website of related activities and relevant information. Pertinent information can be posted on selected websites with appropriate links to relevant information. An important part of the outreach program will be advising property owners of the merits of flood insurance.

Lead and Cooperating Agencies The Tehama County Building and Safety Committee in coordination with the FHMCC.

Estimated Cost In-house personnel cost.

Benefit Greatly enhance community relationship and overall awareness of the flood hazard mitigation effort.

Potential Funding In-house personnel costs.

Schedule Incorporate as an activity with Action No. 9.





Action No. 13 Develop an Early Warning and Flood Alert System

Priority Medium.

Background The primary creeks and channels in the Antelope and the Corning areas overtop during high runoff events causing the respective areas to be plagued with widespread overland flooding that adversely impacts roadways and properties. These problems are attributed largely to Antelope, Jewett, and Burch Creeks for the two areas, respectively. These areas do not have active stream flow stations. A precipitation station is located at the Corning airport. The respective areas would benefit from having access to real-time data and flood forecasting information in view of the “flashy” hydrology of the systems. It is recommended that both watersheds be equipped with real-time data monitoring stations and data acquisition systems for stream flow and precipitation. Information can be obtained for selected stations through the website of Tehama County Flood Control & Water Conservation District.

<http://www.tehamacountywater.ca.gov/links.htm>

Lead and Cooperating Agencies Tehama County Flood Control & Water Conservation District working in close coordination with DWR and the Sheriff’s Department.

Estimated Cost \$150,000.

Benefit Facilitates implementing an effective early warning and flood alert system could allow citizens to take remedial actions to evacuate people or livestock and implement other measures to avoid or minimize flood damage.

Potential Funding FMA, DWR Local Assistance Program.

Schedule Within three years.





SECTION 6.0 – PLAN MAINTENANCE PROCESS

Mitigation Action No. 11 recommends transitioning the Steering Committee to a FHMCC. The FHMCC would not be an implementing entity and would not have any authority over staff of the participating entities. It would function in an advisory capacity to the County Board of Supervisors, coordinate activities of the participating entities with respect to flood hazard mitigation activities, and collectively seek funding to implement the Action Program and related activities.

6.1 Monitoring, Evaluating, and Updating the Plan

Without implementation, the usefulness of the FMP is limited. However, it is recognized that implementation of the actions recommended in this FMP will be constrained by limitations in funding. Nevertheless, it is important that the FHMCC meet at least quarterly to review opportunities for funding and the means of positioning the high-priority actions to improve their opportunity for implementation. Equally important is that from meeting on a regular basis to reviewing the action program and discussing hazards related to flooding, the potential exists for actions to be refined or reconfigured so that progress can be made incrementally on parts of the program. Monitoring and evaluating the action program on a regular basis will result in an elevated awareness among the group of agency representatives that, over time, will facilitate hazard mitigation being incorporated into the day-to-day activities of the local agencies.

Important aspects of the monitoring effort is to constantly seek and identify funding opportunities that can be leveraged to implement FMP actions. This will include creating a portfolio of options on how matching funds may be provided to capitalize on funding opportunities as they become available. Additionally, the FHMCC should monitor the progress made in implementing the mitigation plan and coordinate with FEMA to determine the appropriate time to request participation in FEMA's CRS Program.

6.2 Incorporation Into Existing Planning

It is important that goals, objectives, and policies of the planning processes and documents prepared by the respective jurisdictions having land use responsibility incorporate goals, objectives, and policies that are consistent with and facilitate implementation of actions identified in this FMP and their underlying principles. The long-term success toward mitigation of flood-related hazards is most successful when the foundation for mitigation is incorporated within the day-to-day functions and priorities of government and development. This is best accomplished by constant and well directed efforts that can be achieved through the routine actions of the FHMCC and its networking and communication with colleagues and respective governing bodies.





6.3 Continued Public Involvement

Public participation, particularly from residents of the Dairyville and Corning areas, reflected a very high degree of interest in dealing with the existing problems and measures to avoid future flood-related problems. It is important to keep the community informed of the efforts of the FHMCC. This can be accomplished by scheduling and posting agendas of regular meetings, maintaining a website of pertinent information, and possibly conducting a public workshop on an annual basis to share information. More importantly, this would be a way to gather meaningful input that can assist in refining identified actions or new actions and to judge the effectiveness of the overall effort from the public's perspective.





SECTION 7.0 – REFERENCES

California Department of Forestry & Fire Protection, Tehama-Glenn Unit, “Fire Management Plan,” 2005.

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Tehama County, “Emergency Operations Plan and Appendices,” February 2001.

Tehama County Resource Conservation District, “Annual Report,” July 1, 2002–June 30, 2003.

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TEHAMA COUNTY FLOOD MITIGATION PLAN

The Habitat Restoration Group, “Deer Creek Watershed Management Plan,” Existing Conditions Report, March 10, 1998.

U.S. Army Corps of Engineers, “Sacramento and San Joaquin River Basins Comprehensive Study,” Technical Studies Documentation, Appendix F, Economics Technical Documentation, December 2002.

U.S. Department of Agriculture, Natural Resources Conservation Service, “Antelope Creek Project Area – Floodplain Planning Maps, Hydrology Model, & Hydraulic Model,” Technical Report, Watershed Planning Services, Davis, California, September 2005.

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TABLES

TABLE 1**TEHAMA COUNTY FLOOD MITIGATION PLAN*****PROPERTY VALUE OF ADDITIONAL 100-YEAR
FLOODPLAIN DELINEATED BY USACE¹***

Area	Additional USACE 100-Year Floodplain	
	Land Value, \$	Improvements, \$
Antelope		
Dairyville	4,353,000	5,848,000
Dye Creek	3,030,000	4,097,000
Los Molinas	5,878,000	10,390,000
Tehama		
Vina	5,101,000	6,167,000

¹Land beyond the 100-year floodplain delineated by FEMA.

TABLE 2



TEHAMA COUNTY FLOOD MITIGATION PLAN

DAMAGE SURVEY REPORTS: 1993, 1995, 1997, 1998

Year	Structures	Amount, \$
1993	1	40,108
1995	47	871,254
1997	31	1,238,661
1998	39	669,963
Total	—	2,819,986

TABLE 3



TEHAMA COUNTY FLOOD MITIGATION PLAN

NFIP TOTAL AND REPETITIVE LOSSES

Community	Total No. of Losses	Average No. of Repetitive Losses	Closed Losses	Amount Paid, \$
City of Corning				
Total	20	1	16.00	91,058.67
Repetitive	4	2	0.00	14,486.58
City of Red Bluff				
Total	56	1	41.00	214,149.69
Repetitive	15	2.14	0.00	75,642.43
City of Tehama				
Total	43	1	32.00	386,813.08
Repetitive	8	2.0	0.00	116,171.16
Tehama County				
Total	191	1	144.00	1,263,477.55
Repetitive	66	2.75	0.00	956,099.25
Countywide Total	310	4	233	1,955,498.99
Repetitive Total	93	2.51	0	1,162,399.42

TABLE 4



TEHAMA COUNTY FLOOD MITIGATION PLAN

NFIP REPETITIVE LOSS CLAIMS PAID

Community	Structures	No. of Losses	Average Repetitive Losses	Amount Paid, \$	Average/Loss ¹
City of Corning	2	4	2.00	14,486.58	3,622
City of Red Bluff	7	15	2.14	75,642.43	5,043
City of Tehama	4	8	2.00	116,171.16	14,521
Tehama County	24	66	2.75	956,099.25	14,486
TOTAL	37	93	2.51	1,162,399.42	12,499

¹Through March 31, 2006.

Source: FEMA.

TABLE 5



TEHAMA COUNTY FLOOD MITIGATION PLAN

***NFIP SINGLE LOSS CLAIMS PAID
OCTOBER 1, 1995 — SEPTEMBER 30, 2006***

Community	No. of Losses	Amount Paid, \$
City of Corning	9	94,020
City of Red Bluff	20	185,681
City of Tehama	4	18,289
Tehama County	19	73,366
TOTAL	52	371,356

TABLE 6



TEHAMA COUNTY FLOOD MITIGATION PLAN
ESTIMATE OF POTENTIAL DAMAGE TO ALL IMPROVEMENTS
WITHIN 100-YEAR SPECIAL FLOOD HAZARD AREAS¹

Flood Hazard Area	Improvement Value ² , \$	Values of Damages at 1-Foot Depth, \$		Values of Damages at 2-Foot Depth, \$	
		Structural ³	Content ⁴	Structural	Content
Antelope Area	11,507,071	2,681,148	765,220	3,693,770	1,029,883
Dairyville	12,204,640	2,843,681	811,609	3,917,689	1,092,315
Tehama City	12,978,542	3,024,000	863,073	4,166,112	1,161,580
Los Molinos 1	2,978,759	694,051	198,087	956,182	266,599
Los Molinos 2	480,698	112,003	31,966	154,304	43,022
Corning City	23,249,271	5,417,080	1,546,077	7,463,016	2,080,810
Corning County	2,571,724	599,212	171,020	825,523	230,169
Additional Based on Army Corps of Engineers Comprehensive Study					
Antelope	9,237,729	2,152,391	614,309	2,965,311	826,777
Dairyville	5,845,094	1,361,907	388,699	1,876,275	523,136
Dye Creek	4,097,566	954,733	272,488	1,315,319	366,732
Los Molinos	10,390,756	2,421,046	690,985	3,335,433	929,973
Vina Comp	6,167,829	1,437,104	410,161	1,979,873	552,021

¹Based on one-story residential buildings without basement

²Tehama County May 2006 Assessor's Data

³One- and two-foot damage based on percentages obtained from Table 9 Appendix F, Economics Technical Documentation Sacramento and San Joaquin River Basins Comprehensive Study, California December 2002.

⁴Content damage calculated assuming residential and mobile homes (50 percent of structural value). One- and two-foot damage percentages taken from Table 9 Appendix F, Economics Technical Documentation Sacramento and San Joaquin River Basins Comprehensive Study, California December 2002

TABLE 7



TEHAMA COUNTY FLOOD MITIGATION PLAN

ESTIMATE OF POTENTIAL DAMAGE TO ALL IMPROVEMENTS WITHIN 100-YEAR SPECIAL FLOOD HAZARD AREAS WITH WILLIAMSON LAND ACT REMOVED ¹

Flood Hazard Area	Improvement Value ² , \$	Values of Damage at 1-Foot Depth, \$		Values of Damage at 2-Foot Depth, \$	
		Structural ³	Content ⁴	Structural	Content
Antelope Area	10,396,351	2,422,350	691,357	3,337,229	930,473
Dairyville	11,459,976	2,670,174	762,088	3,678,652	1,025,668
Tehama City	12,054,417	2,808,679	801,619	3,869,468	1,078,870
Los Molinos 1	2,815,680	656,053	187,243	903,833	252,003
Los Molinos 2	480,698	112,003	31,966	154,304	43,022
Corning City	23,249,271	5,417,080	1,546,077	7,463,016	2,080,810
Corning County	2,390,046	556,881	158,938	767,205	213,909
Additional Based Upon U.S. Army Corps of Engineers Comprehensive Study					
Antelope	6,408,245	1,493,121	426,148	2,057,047	573,538
Dairyville	3,402,918	792,880	226,294	1,092,337	304,561
Dye Creek	3,755,528	875,038	249,743	1,205,524	336,120
Los Molinos	4,115,842	958,991	273,703	1,321,185	368,368
Vina	2,799,741	652,340	186,183	898,717	250,577

¹Based upon one-story residential buildings without basement.

²Tehama County May 2006 Assessor's Data.

³One- and two-foot damage based on percentages obtained from Table 9 Appendix F, Economics Technical Documentation Sacramento and San Joaquin River Basins Comprehensive Study, California December 2002

⁴Content damage calculated assuming residential and mobile homes (50 percent of structural value). One- and two-foot damage percentages taken from Table 9 Appendix F, Economics Technical Documentation Sacramento and San Joaquin River Basins Comprehensive Study, California December 2002.

MAPS

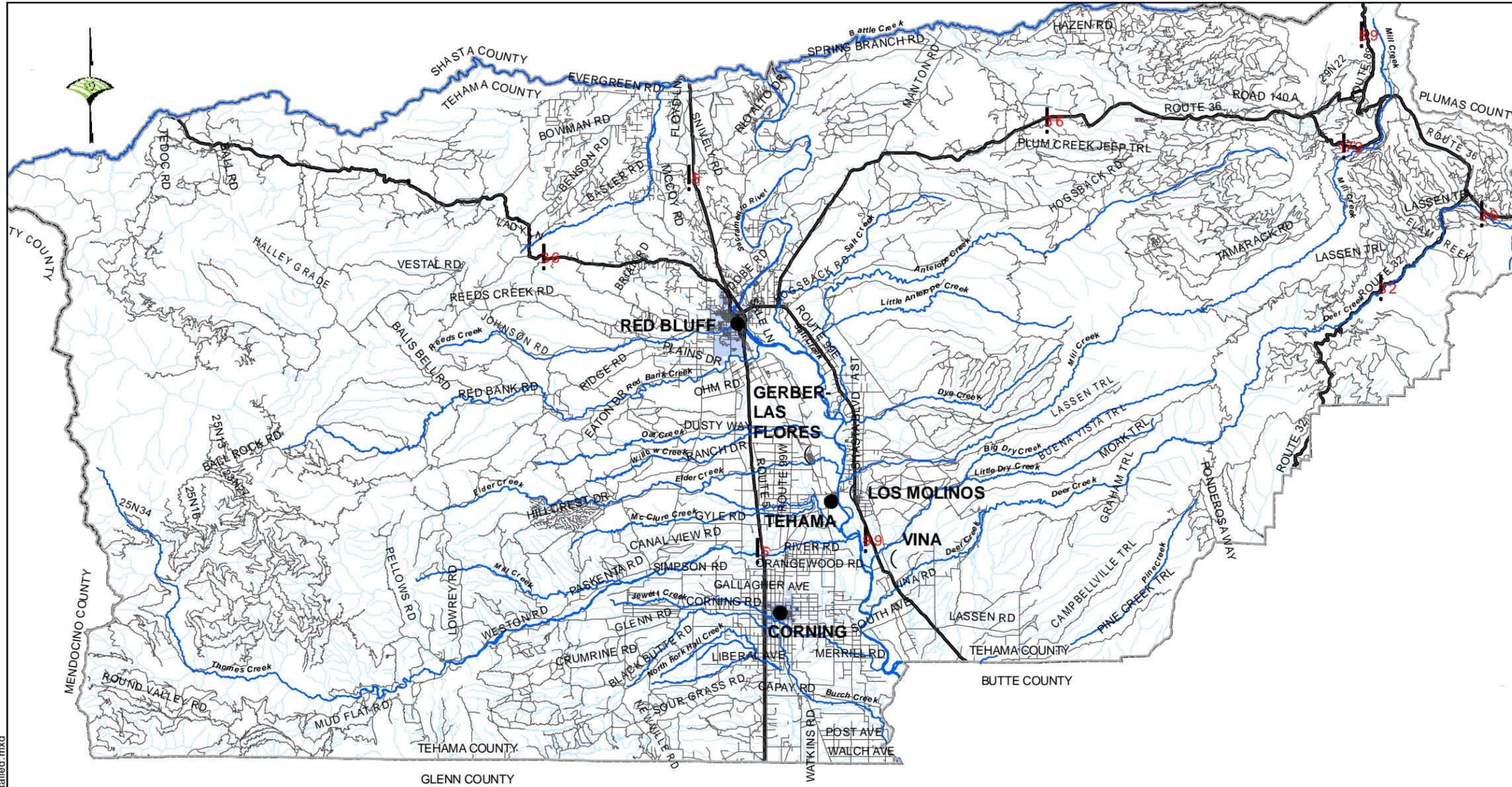
TEHAMA COUNTY FLOOD MITIGATION PLAN



LEGEND:

- INCORPORATED COMMUNITY
- UNINCORPORATED COMMUNITY

Sources:
 1. County Boundary, Highways: California Spatial Information Library, 1997-2002.
 2. Roads, Water, Cities: Tehama County Transportation Commission, 2005.



MAP 1

Tehama County Location Map



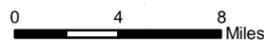
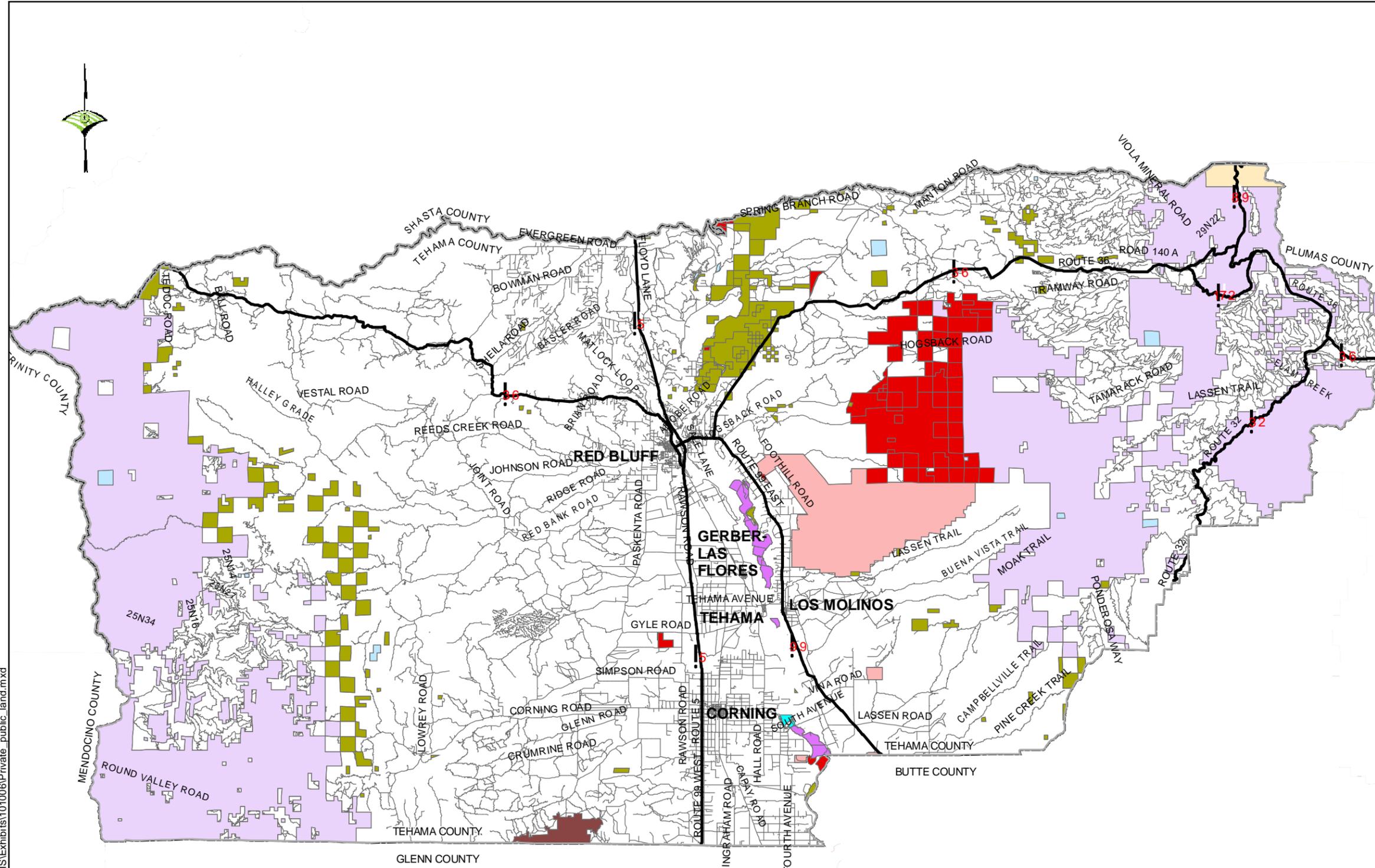
TEHAMA COUNTY FLOOD MITIGATION PLAN



LEGEND:

- PUBLIC AND PRIVATE LAND OWNERSHIP:**
- U.S. BUREAU OF LAND MANAGEMENT
 - U.S. BUREAU OF RECLAMATION
 - CA DEPT OF FISH AND GAME
 - CA DEPT OF FORESTRY AND FIRE PROTECTION
 - CA DEPT OF PARKS AND RECREATION
 - CA STATE ACADEMIC INSTITUTIONS
 - CONSERVANCY/LAND TRUST
 - DEPARTMENT OF DEFENSE
 - NATIONAL PARK SERVICE
 - PRIVATE
 - STATE LANDS COMMISSION
 - U.S. FISH AND WILDLIFE SERVICE
 - USDA FOREST SERVICE

Source:
County Boundary, Highways, Ownership:
California Spatial Information Library, 1997-2002.



MAP 2

Public and Private Land Ownership



Project Path: J:\Jobs\8278_TehamaCounty\GIS\Exhibits\101006\Private_land.mxd

TEHAMA COUNTY FLOOD MITIGATION PLAN

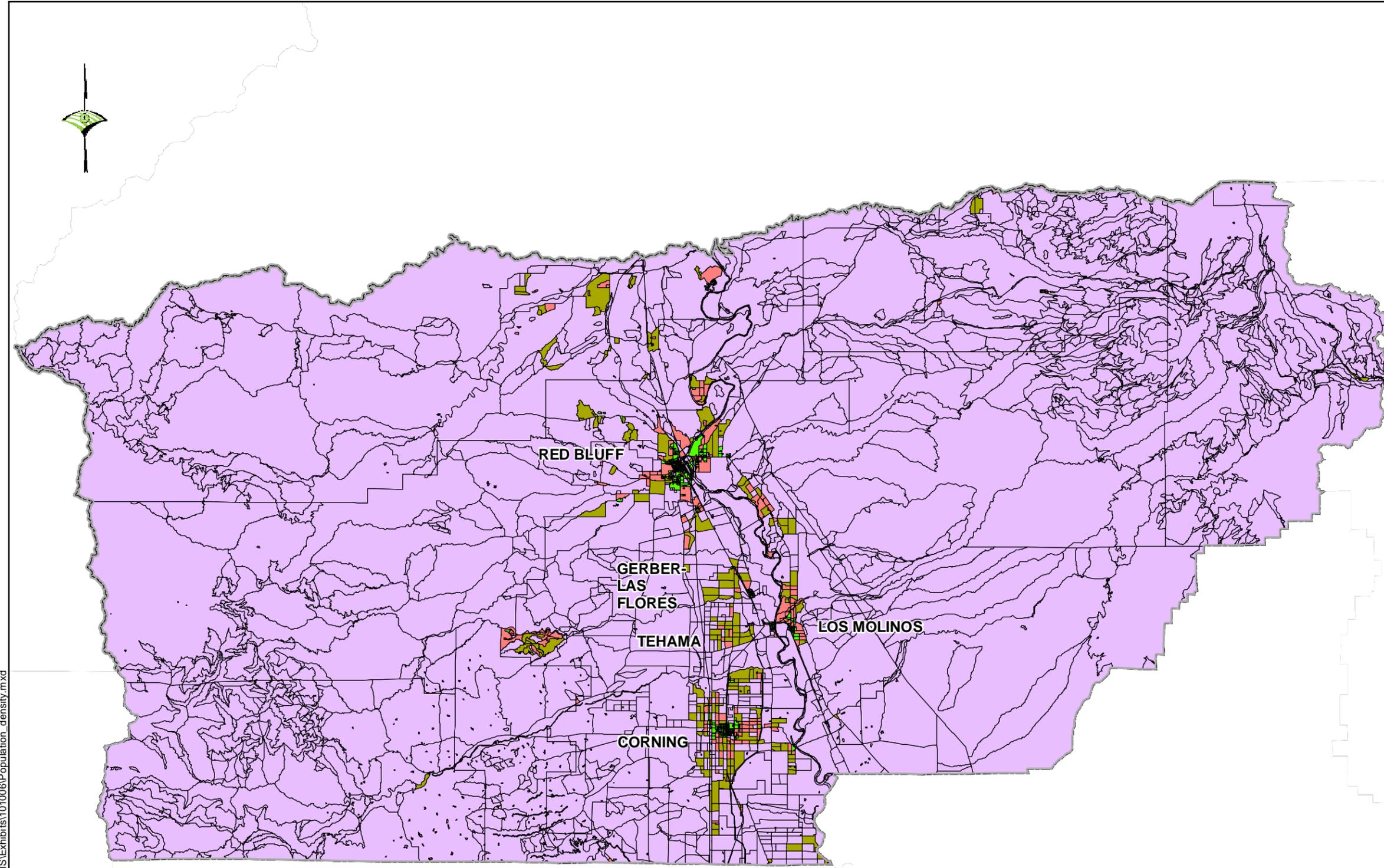


LEGEND:

POPULATION PER SQUARE MILE:

- 0 - 100
- 101 - 250
- 251 - 1,000
- 1,001 - 10,000
- 10,001 - 1,000,000

- Sources:
1. County Boundary: California Spatial Information Library, 1997-2002.
 2. Census 2000: State Office of Emergency Services, 2003.



MAP 3

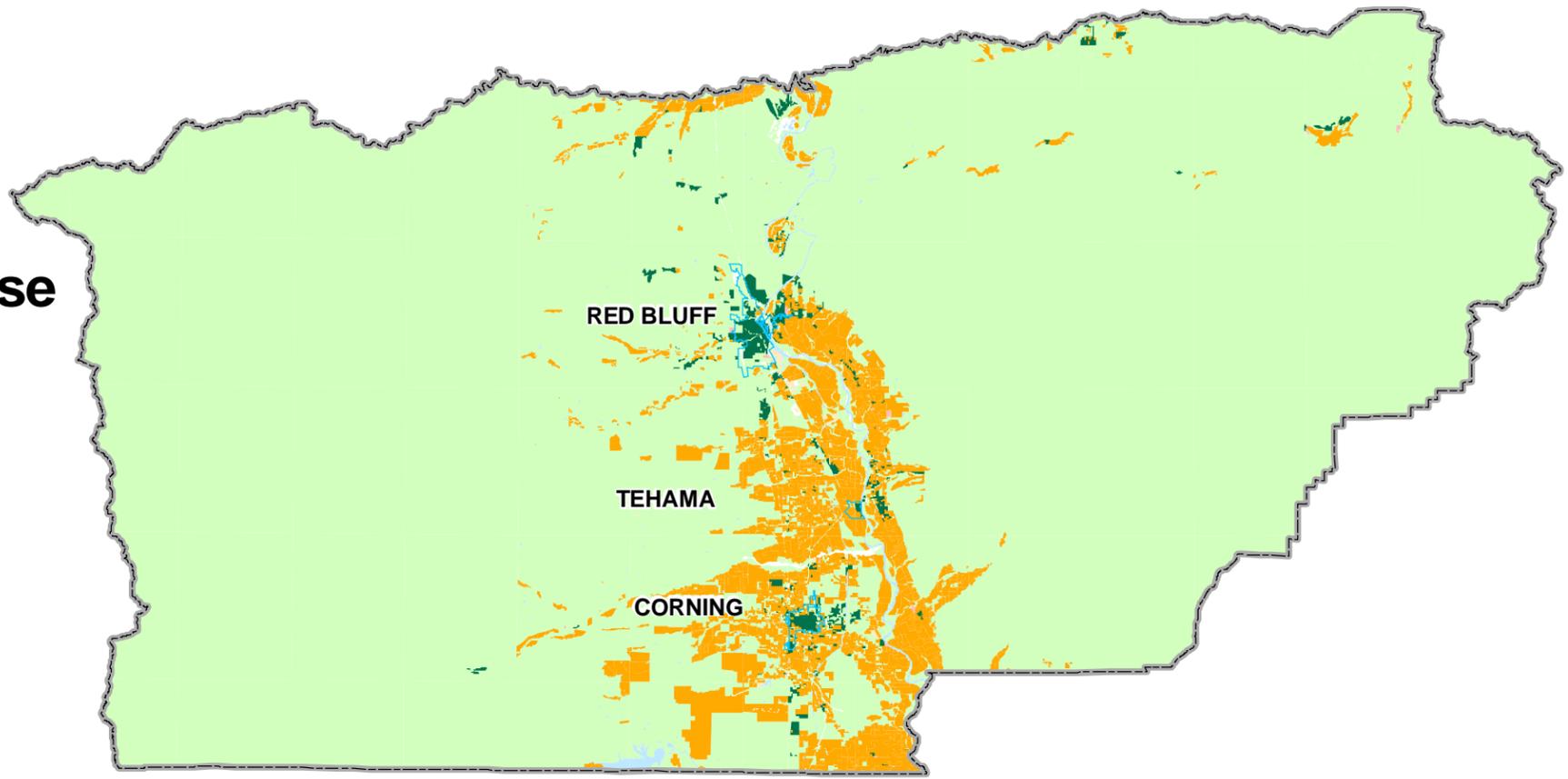
Population Density



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1994 Land Use



TEHAMA COUNTY FLOOD MITIGATION PLAN

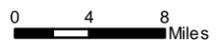
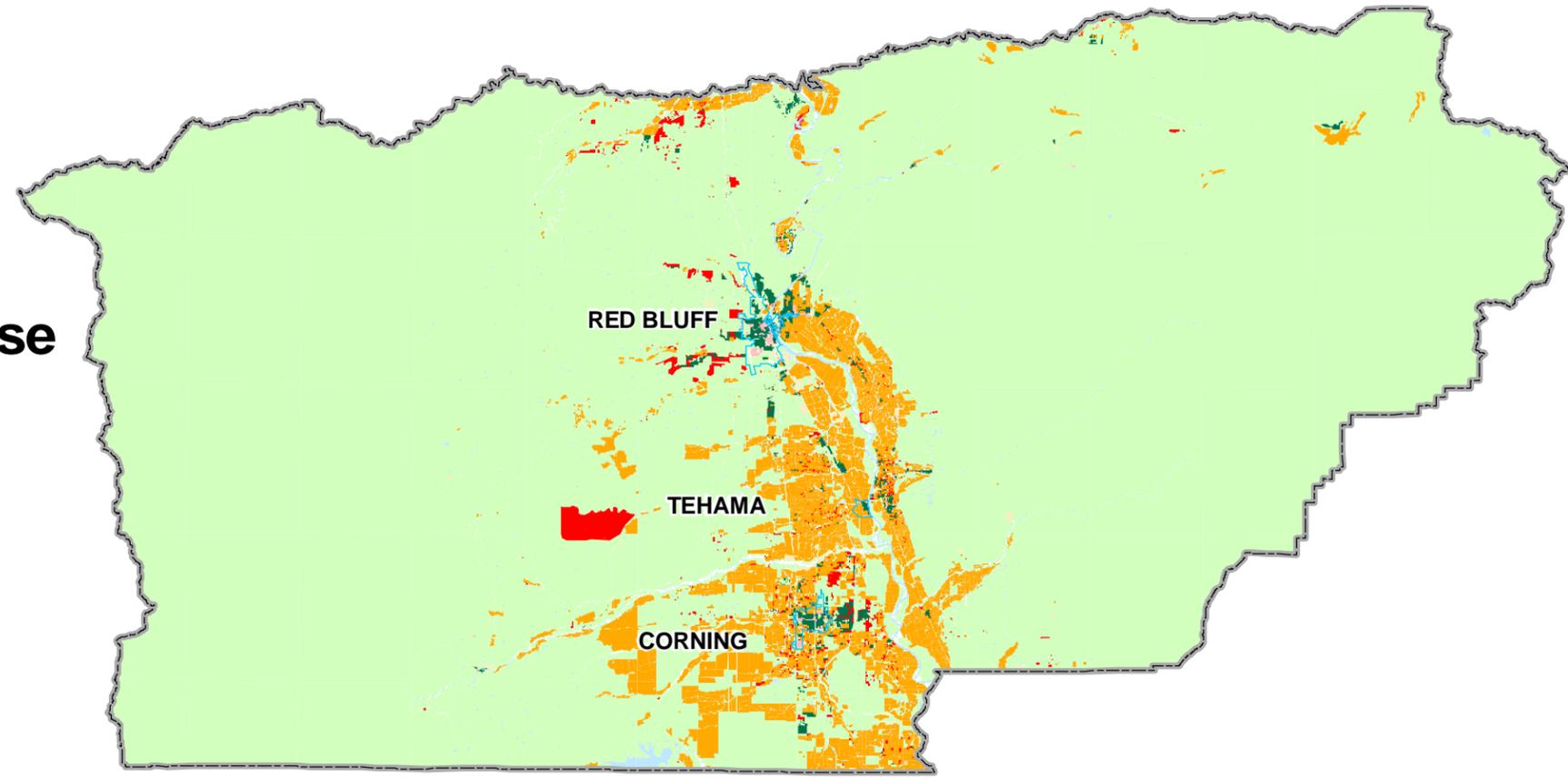


LEGEND:

- AGRICULTURE
- COMMERCIAL
- FOREST
- INDUSTRIAL
- WATER
- RESIDENTIAL
- INCREASE IN RESIDENTIAL FROM 1994

Sources:
 1. County Boundary: California Spatial Information Library, 1997-2002.
 2. Land Use: California Department of Water Resources, 1994-1999.

1999 Land Use



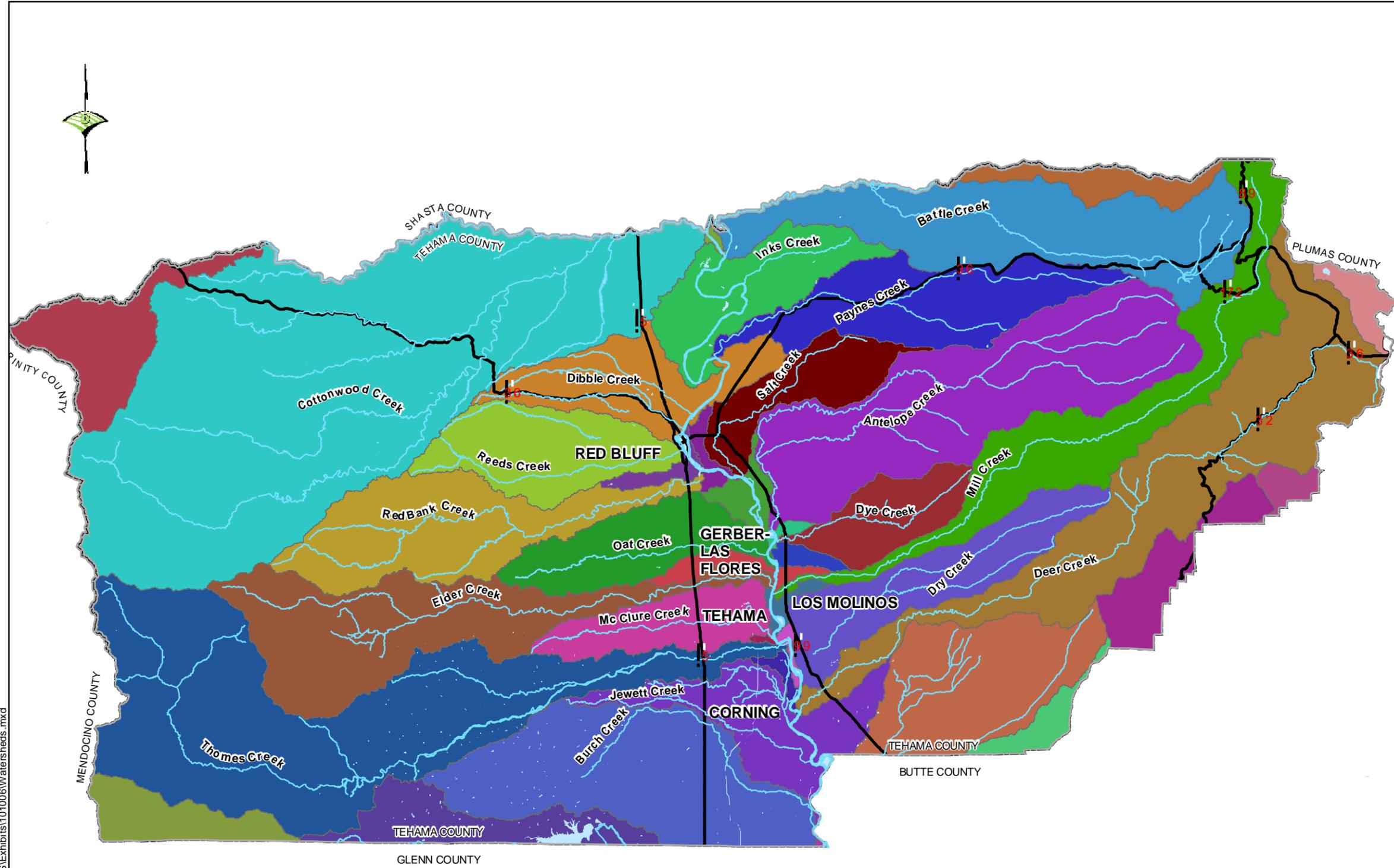
MAP 4

Land Use 1994 and 1999

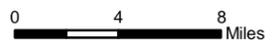


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TEHAMA COUNTY FLOOD MITIGATION PLAN



Sources:
 1. County Boundary, Highways, Water: California Spatial Information Library, 1997-2002.
 2. Watersheds: California Department of Forestry and Fire Protection, 1999.



MAP 5

*Tehama County
Principal Watersheds*



Project Path: J:\Jobs\8278_TehamaCounty\GIS\Exhibits\101006\Watersheds.mxd

TEHAMA COUNTY FLOOD MITIGATION PLAN

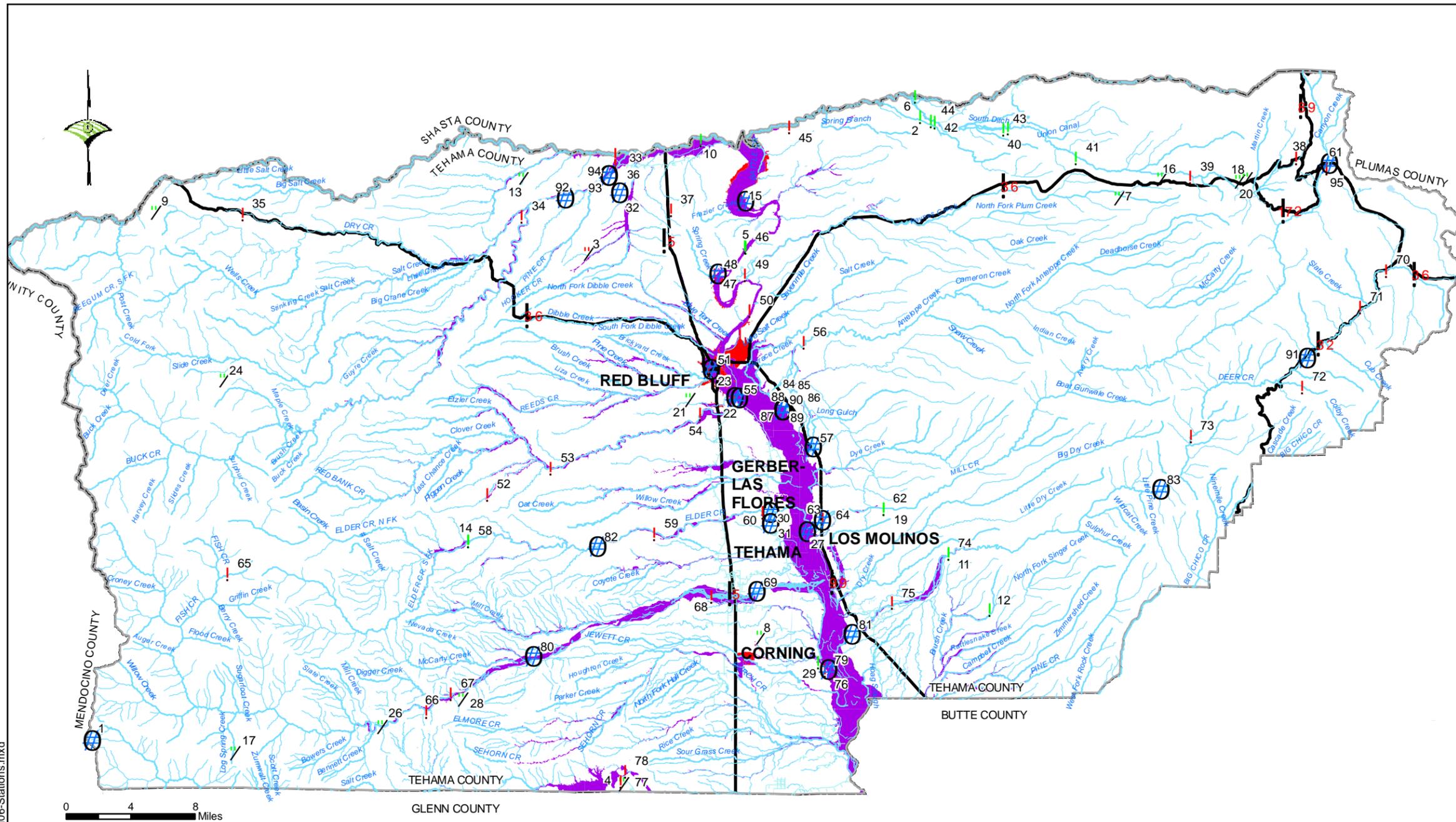


LEGEND:

STATIONS

TYPE, ACTIVE

- FLOW, YES
- FLOW, NO
- PRECIPITATION, YES
- PRECIPITATION, NO
- WQ, TEMP, SNOW, STAGE, ETO
- A-NO BASE ELEVATIONS DETERMINED
- XF-AREA OF 500-YEAR FLOOD



- Sources:
- County Boundary, Highways, Water: California Spatial Information Library, 1997-2002.
 - Stations: California Department of Water Resources, CDEC Data, 2005.
 - Stations: California Irrigation Management Information Systems, 2005.
 - Stations: U.S. Geological Survey, NWIS Data, 2005.

INDEX	STATION NAME	INDEX	STATION NAME	INDEX	STATION NAME	INDEX	STATION NAME
1	ANTHONY PEAK	21	RED BLUFF	41	SF BATTLE C.BL DIV TO S ON NR MANTON CA	61	MILL C NR MINERAL CA
2	SOUTH FORK BATTLE CREEK NEAR MANTON	22	SACRAMENTO R AT RED BLUFF DIVERSION DAM	42	INSKIP PH NR MANTON CA	62	MILL C NR LOS MOLINOS CA
3	BAKER	23	RED BLUFF (ALERT)	43	SF BATTLE C.BL DIV TO INSKIP CN NR MANTON CA	63	MILL C A SHERWOOD BRIDGE NR LOS MOLINOS CA
4	BLACK BUTTE	24	SADDLE CAMP	44	SF BATTLE C.BL DIV TO COLEMAN CN NR MANTON CA	64	MILL C A MOUTH NR LOS MOLINOS CA
5	SACRAMENTO RIVER AT BEND BRIDGE	25	SACTO. R ABV BEND BRIDGE	45	BATTLE C NR COTTONWOOD CA	65	SNAKE C NR PASKENTA CA
6	NORTH FORK BATTLE CREEK	26	THOMES CREEK (CDF)	46	SACRAMENTO R AB BEND BRIDGE NR RED BLUFF CA	66	THOMES C TRIBA PASKENTA CA
7	BATTLE RIDGE	27	SACRAMENTO RIVER AT TEHAMA BRIDGE	47	SACRAMENTO R AT BEND BRIDGE NR RED BLUFF CA	67	THOMES C A PASKENTA CA
8	CORNING AIRPORT	28	SACRAMENTO RIVER AT THOMES CREEK	48	SACRAMENTO R A BEND CA	68	THOMES C A RAWSON RD BRIDGE NR RICHFIELD CA
9	COTTONWOOD CREEK NEAR BEEGLUM	29	SACRAMENTO RIVER AT VINA WOODSON BRIDGE	49	PAYNES CN NR RED BLUFF CA	69	THOMES C NR MOUTH NR CORNING CA
10	COTTONWOOD CREEK AUXILIARY GAGE	30	GERBER #8	50	SACRAMENTO R NR RED BLUFF CA	70	DEER C AT DEER CREEK MEADOWS CA
11	DEER CREEK NR VINA	31	GERBER DRYLAND #108	51	SACRAMENTO R A RED BLUFF CA	71	DEER C BL SLATE C NR DEER CREEK MEADOWS CA
12	DEER CREEK BELOW STANFORD VINA DAM	32	COTTONWOOD C NR QNO CA	52	VALE GULCH TRIB NR RED BANK CA	72	NF CALF C NR BUTTE MEADOWS CA
13	DAVIS RANCH	33	COTTONWOOD C AB SF NR COTTONWOOD CA	53	RED BANK C NR RED BLUFF CA	73	DEER C A POLK SPRINGS CA
14	ELDER CREEK NEAR PASKENTA	34	SF COTTONWOOD C NR COTTONWOOD CA	54	RED BANK C A RAWSON RD BR NR RED BLUFF CA	74	DEER C NR VINA CA
15	JELLYS FERRY	35	BUDDEN CYN NR BEEGLUM CA	55	SACRAMENTO R BL RED BLUFF CA	75	DEER C A RED BRIDGE NR VINA CA
16	LASSEN LODGE	36	SF COTTONWOOD C A EVERGREEN RD NR COTTONWOOD CA	56	ANTELOPE C NR RED BLUFF CA	76	SACRAMENTO R A VINA BRIDGE NR VINA CA
17	LOG SPRING	37	COTTONWOOD C TRIB NR COTTONWOOD CA	57	ANTELOPE C NR MOUTH NR LOS MOLINOS CA	77	SOUTH DIVERSION ON NR ORLAND CA
18	MINERAL	38	SUMMIT C NR MINERAL CA	58	ELDER C NR PASKENTA CA	78	STONY C BL BLACK BUTTE DAM NR ORLAND CA
19	MILL CREEK NR LOS MOLINOS	39	SF BATTLE C NR MINERAL CA	59	ELDER C NR HENLEYVILLE CA	79	SACRAMENTO R A WOODSON BR CA
20	MINERAL (OBSERVER)	40	S F H NR MANTON CA	60	ELDER C A GERBER CA	80	THOMES C A FLOURNOY CA

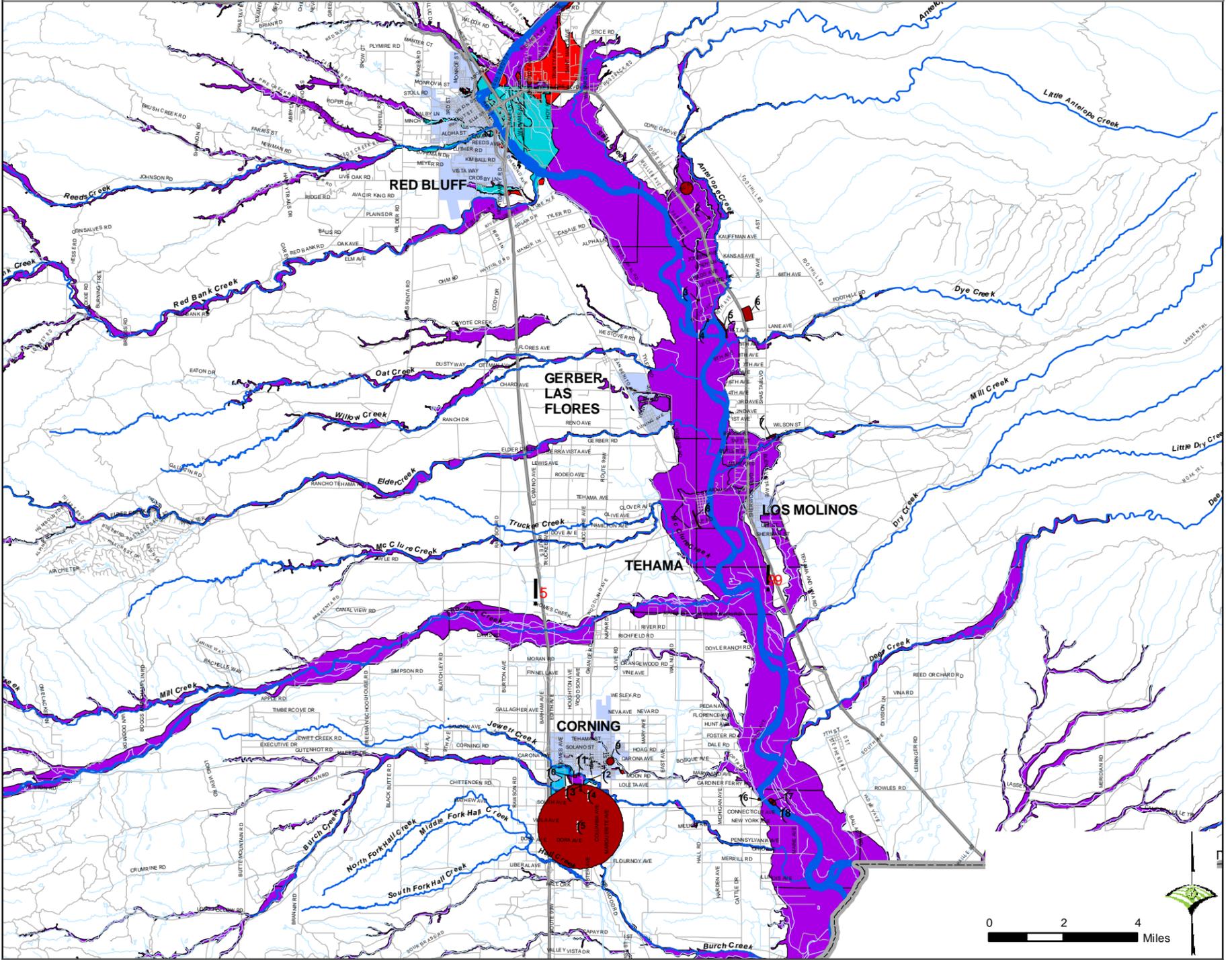
MAP 6

Climatological and Streamflow Locations



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ID No.	NAME	Address1	Address2	City	Phone	Comments	Meeting
1	Russell Skelton	12220 Craig Avenue		Red Bluff	527-0953	Water backs up from the intersection of Electric Ave/Craig Ave. Drainage along Craig Ave.	1/19/2006
2	Thomas Burgess	11770 Craig Avenue		Red Bluff	527-1367	Draining water at Craig Ave & Oklahoma Ditch filled with debris brush. Property floods from water when Butler Slough overflows. House flooded in 1995 12"-18".	1/19/2006
3	Joe & Diane Reynolds	10821 Hwy 99E	Location of flooding: 10631 Bryne Avenue	Los Molinos	529-1628	River floods come back up Bryne and floods several houses. This is my grandfather's house.	1/19/2006
4	David Bickford	24625 Clement Avenue		Los Molinos (Dairyville)	529-3814	First we get 2-4 feet of water through the crane orchard. Next we get flooded from the back by the Sacramento River.	1/19/2006
5	Don Carlson	10455 65th Avenue		Los Molinos	527-8696	65th Ave floods to 61st Ave behind homes on Antelope Creek.	1/19/2006
6	Joe & Diane Reynolds	10821 Hwy 99E	Location of flooding: 25180 64th Avenue	Los Molinos	529-1628	Water standing 3 ft. deep in orchards, pond behind property overflows, drainage ditches higher than our property, drains not working, ditches not maintained	1/19/2006
7	Charles Coker	25093 Butler Street		Los Molinos	384-1214	North Branch of Mill Creek at Shasta & Bill Ct needs to be cleaned trees (levee construction upstream).	1/19/2006
8	Ron Warner	332 Pine Street	P.O. Box 250	Red Bluff	527-4655	Floods Gyle Road.	1/24/2006
9	Betty (Elizabeth) Moses	4118 Woodson Avenue		Corning	824-2848	Olive View School built on a natural drain.	1/24/2006
10	Brad Perrault	22822 Eva Way		Corning	824-1554	Juliet Creek flooded our place twice in the last 10 years. Development behind us. What is happening with the water between Houghton & Woodson Ave.	1/24/2006
11	Leonard & Rhonda Nunes	22827 Eva Way	Off Woodson Avenue on Jewett Creek	Corning	824-4339		1/24/2006
12	Unknown					Railway acts as a dam.	1/24/2006
13	William Ripka	4015 Woodson Avenue		Corning	824-6151	Water backs up at railroad tracks - 4.7 acres.	1/24/2006
14	John Sanders	3985 Woodson Avenue		Corning		11.5 acres.	1/24/2006
15	Bill Moses	4118 Woodson Avenue		Corning	824-2848	FEMA maps not accurate, 3/4" rain.	1/24/2006
16	Susan & LeRoy Anderson	3738 Illinois Avenue		Corning	824-0816	Flood mapping.	1/24/2006
17	George & Ginny Whitney (Woodson Bridge RV Park)	25433 South Avenue		Corning	839-2151	Flood waters covered 9 acres of RV Park & Mobile Home Park, depths 2-6 feet. 15 mobile homes & 1 foundation home, 2 bathroom facilities & clubhouse.	1/19/2006
18	Ron & Dee Meyer	25433 South Avenue		Corning	839-2389		1/24/2006



TEHAMA COUNTY FLOOD MITIGATION PLAN



LEGEND:

- IDENTIFIED FLOOD AREAS (FROM PUBLIC MEETING)
- A-NO BASE ELEVATIONS DETERMINED
- A-E BASE FLOOD ELEVATIONS DETERMINED
- A-O-DEPTHS OF 1 TO 3 FEET (USUALLY SHEET FLOW); AVERAGE DEPTHS DETERMINED
- X-F-AREA OF 500-YEAR FLOOD

- Sources:
1. County Boundary, Highways, Cities: California Spatial Information Library, 1997-2002.
 2. Roads, Water, DSRs, Cities: Tehama County Transportation Commission, 2005-2006.
 3. FEMA Special Flood Hazard Areas: FEMA FIRMS.

MAP 7

Designated
FEMA Special Flood Hazard Areas
and
Public Identified Flood Problem Areas



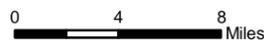
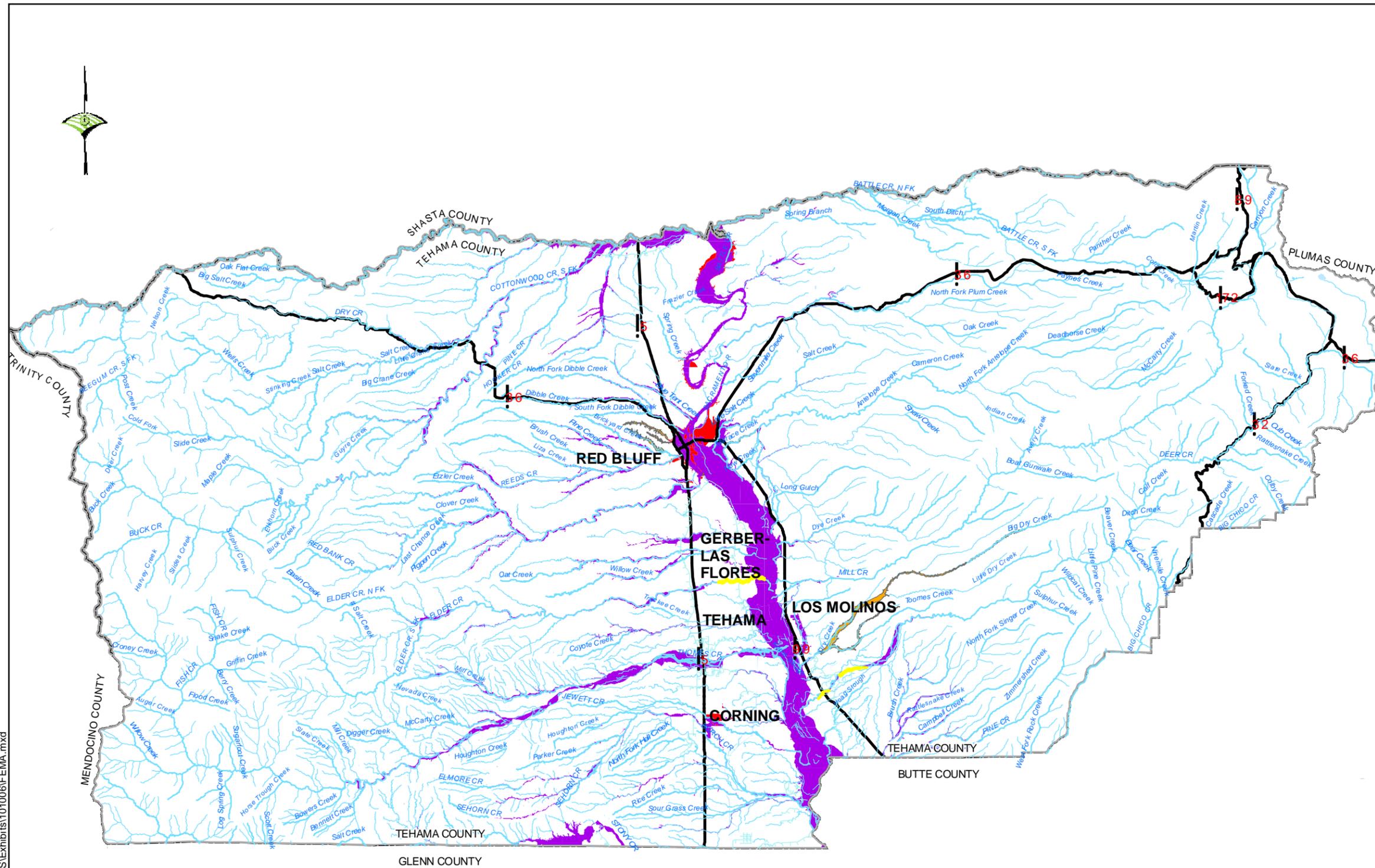
TEHAMA COUNTY FLOOD MITIGATION PLAN



LEGEND:

- DWR AWARENESS FLOODPLAIN
- A-NO BASE ELEVATIONS DETERMINED
- XF-AREA OF 500-YEAR FLOOD
- FEDERAL PROJECT LEVEL

- Sources:
1. County Boundary, Highways, Water: California Spatial Information Library, 1997-2002.
 2. FEMA Q3: Tehama County Transportation Commission, 2005.
 3. Awareness Floodplains: California Department of Water Resources, 2002.



MAP 8

**FEMA Special Flood Hazard Areas
and Federal Project Levees**



WOOD RODGERS
DEVELOPING INNOVATIVE DESIGN SOLUTIONS

TEHAMA COUNTY FLOOD MITIGATION PLAN

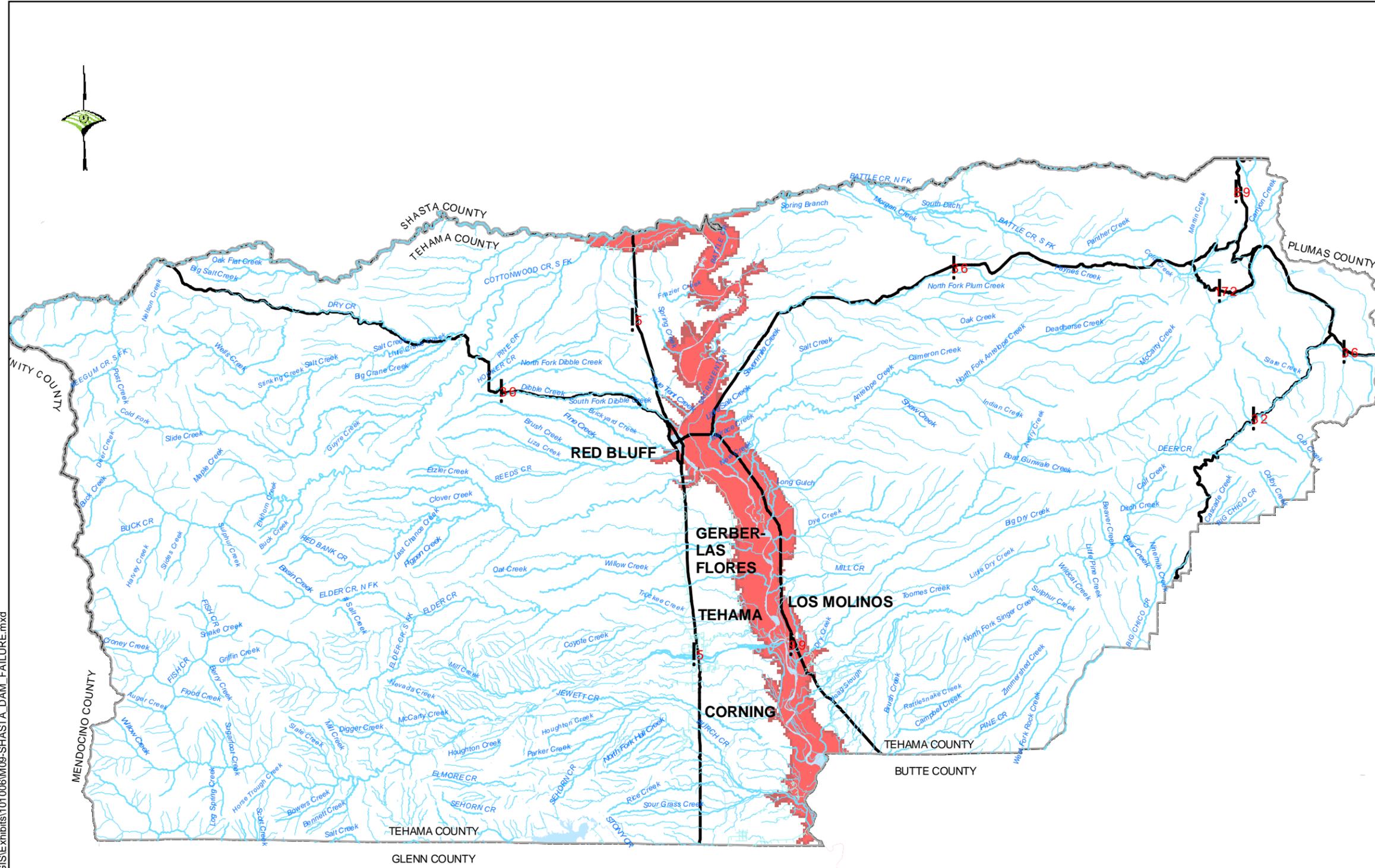


LEGEND:
 INUNDATION AREA

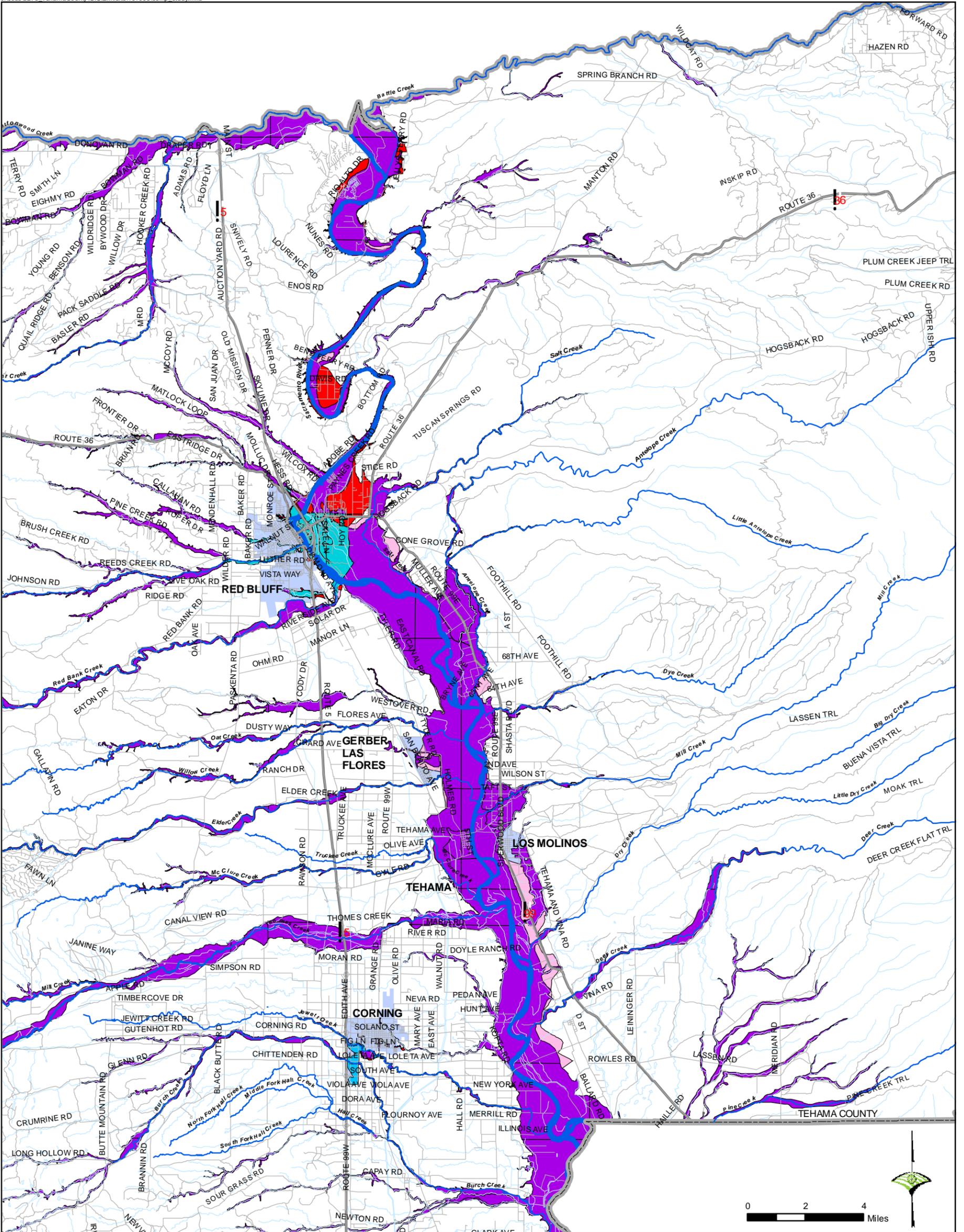
Sources:
 1. County Boundary, Highways, Water:
 California Spatial Information Library, 1997-2002.
 2. California Governor's Office of Emergency Services, 2003

MAP 9

**Shasta Dam Failure
Inundation Area**



Project Path: J:\Jobs\8278_Tehama County\GIS\Exhibits\101006M09-SHASTA_DAM_FAILURE.mxd



TEHAMA COUNTY FLOOD MITIGATION PLAN



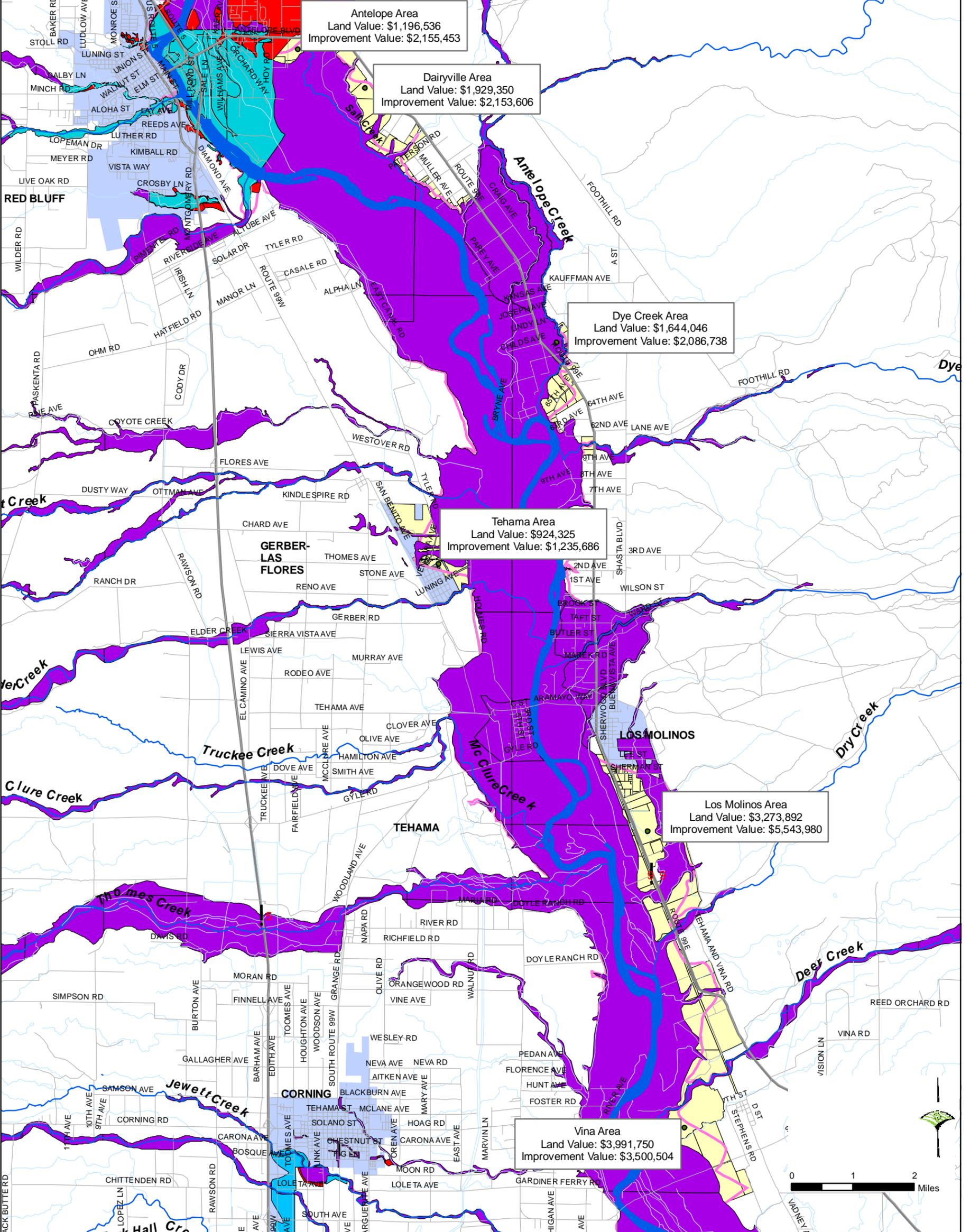
- LEGEND:**
- A-NO BASE ELEVATIONS DETERMINED
 - A-BASE FLOOD ELEVATIONS DETERMINED
 - AO-DEPTHS OF 1 TO 3 FEET (USUALLY SHEET FLOW); AVERAGE DEPTHS DETERMINED
 - X-FLOOD OF 500-YEAR FLOOD
 - 100 YEAR INUNDATION AREA (COMPREHENSIVE STUDY)

- Sources:**
1. County Boundary, Highways, Cities: California Spatial Information Library, 1997-2002.
 2. Roads, Water, DSRs, Cities: Tehama County Transportation Commission, 2005-2006.
 3. FEMA Special Flood Hazard Areas: FEMA FIRMs.
 4. Comprehensive Study Data: California Department of Water Resources

**Comparative Flood Hazard Zones
FEMA FIRM vs. USACE
Comprehensive Study**

MAP 10





TEHAMA COUNTY FLOOD MITIGATION PLAN



LEGEND:

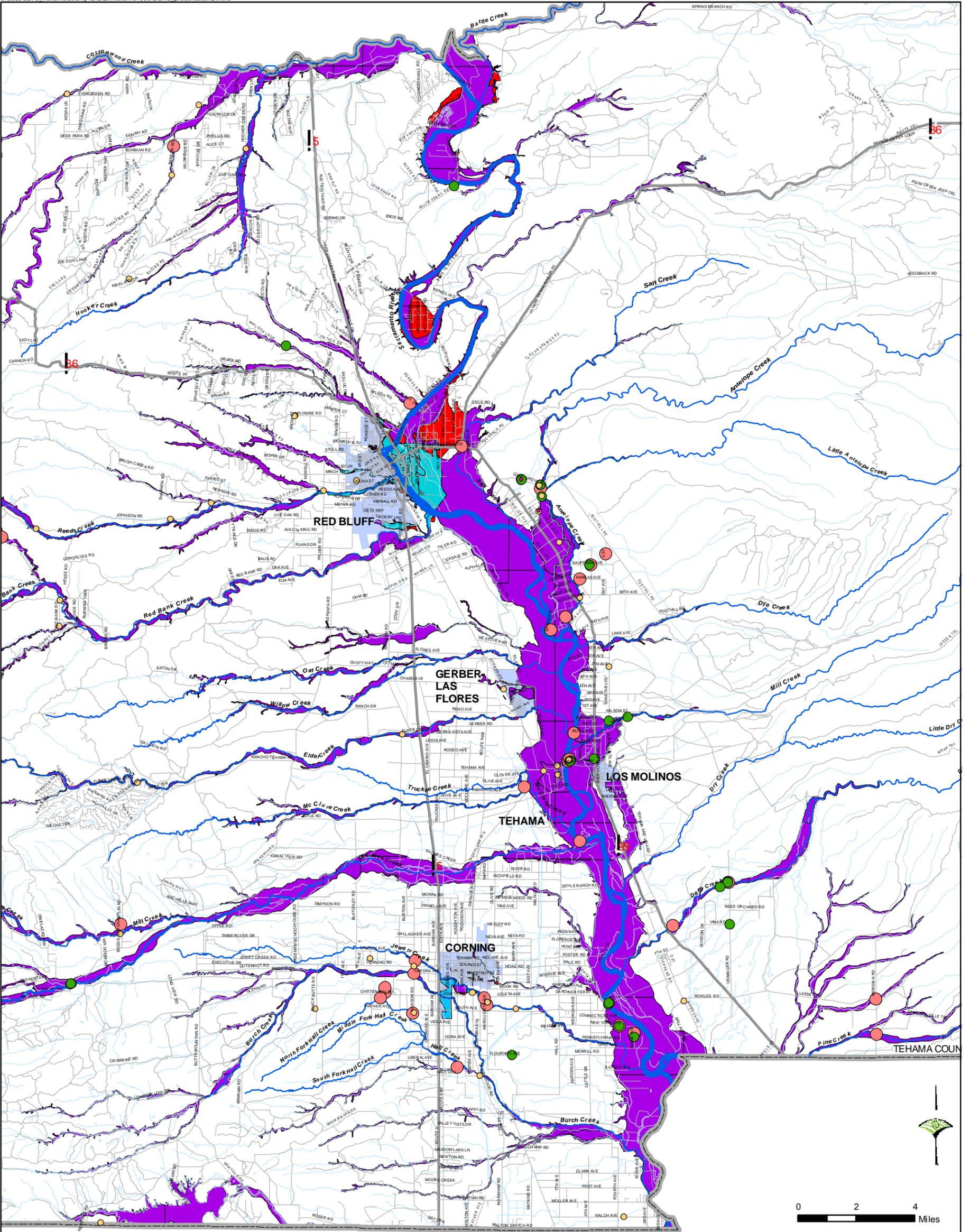
- A-NO BASE ELEVATIONS DETERMINED
- A-E BASE FLOOD ELEVATIONS DETERMINED
- A-O-DEPTHS OF 1 TO 3 FEET (USUALLY SHEET FLOW); AVERAGE DEPTHS DETERMINED
- X-F-AREA OF 500-YEAR FLOOD
- 100 YEAR INUNDATION AREA (COMP STUDY)
- ADDITIONAL 100-YEAR FLOODPLAIN BASED ON USACE COMPREHENSIVE STUDY

- Sources:**
1. County Boundary, Highways, Cities: California Spatial Information Library, 1997-2002.
 2. Roads, Water, DSRs, Cities: Tehama County Transportation Commission, 2005-2006.
 3. FEMA SFHAS: FEMA FIRMS.
 4. Comprehensive Study Data: California Department of Water Resources

Additional Area and Property Values within USACE 100-Year Floodplains

MAP 11





TEHAMA COUNTY FLOOD MITIGATION PLAN



LEGEND:

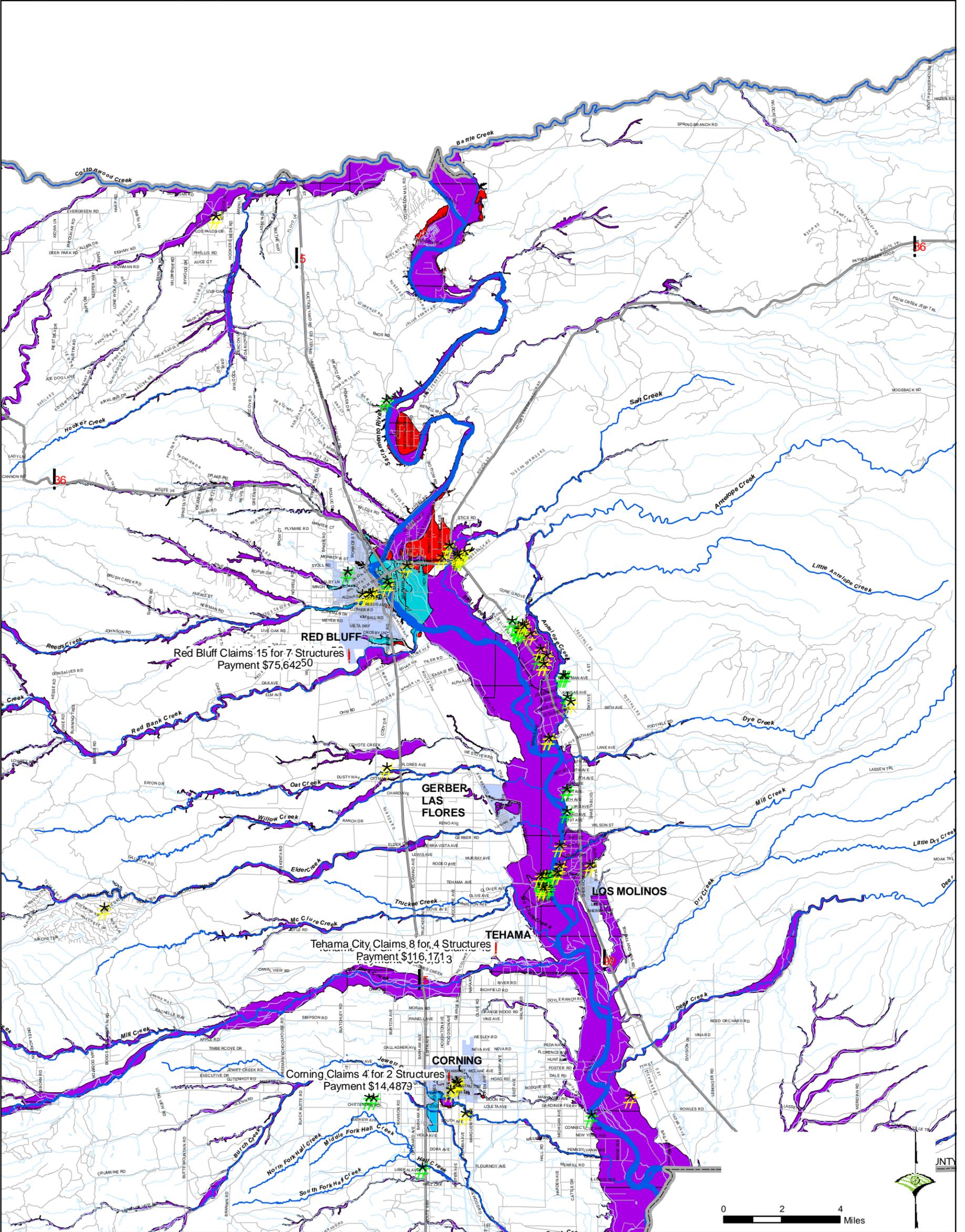
- 1993 DAMAGE SURVEY REPORT LOCATION
- 1995 DAMAGE SURVEY REPORT LOCATION
- 1997 DAMAGE SURVEY REPORT LOCATION
- 1998 DAMAGE SURVEY REPORT LOCATION
- A-NO BASE ELEVATIONS DETERMINED
- AE-BASE FLOOD ELEVATIONS DETERMINED
- AO-DEPTHS OF 1 TO 3 FEET (USUALLY SHEET FLOW); AVERAGE DEPTHS DETERMINED
- XF-AREA OF 500-YEAR FLOOD

- Sources:**
1. County Boundary, Highways, Cities: California Spatial Information Library, 1997-2002.
 2. Roads, Water, DSRs, Cities: Tehama County Transportation Commission, 2005-2006
 3. FEMA Special Flood Hazard Areas: FEMA FIRMS.

MAP 12

Damage Survey Report Locations
and
FEMA Special Flood Hazard Areas





TEHAMA COUNTY FLOOD MITIGATION PLAN



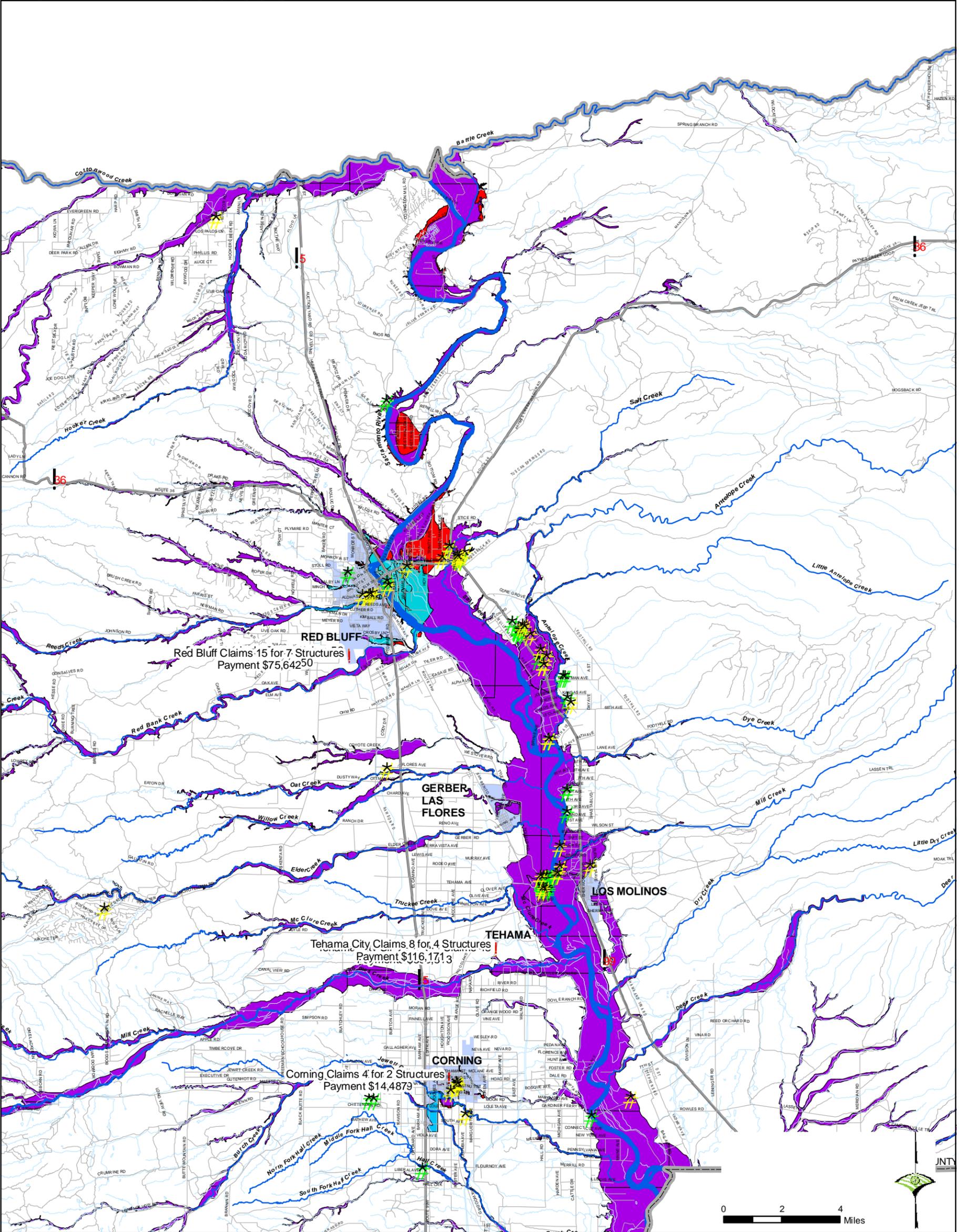
LEGEND:

- SINGLE EVENT LOSS PROPERTY (TEHAMA COUNTY)
- TOTAL REPETITIVE LOSS PROPERTY (TEHAMA COUNTY) 66 CLAIMS PAYMENT \$956,099
- INDIVIDUAL REPETITIVE LOSS LOCATIONS
- TOTAL SINGLE EVENT LOSS PROPERTY (TEHAMA COUNTY) 191 CLAIMS PAYMENT \$1,956,099
- A-NO BASE ELEVATIONS DETERMINED
- AE-BASE FLOOD ELEVATIONS DETERMINED
- AO-DEPTHS OF 1 TO 3 FEET (USUALLY SHEET FLOW); AVERAGE DEPTHS DETERMINED
- XF-AREA OF 500-YEAR FLOOD

- Sources:
1. County Boundary, Highways, Cities: California Spatial Information Library, 1997-2002.
 2. Roads, Water, DSRs, Cities: Tehama County Transportation Commission, 2005-2006.
 3. FEMA Special Flood Hazard Areas: FEMA FIRMs.

MAP 13
**FEMA Repetitive Losses
 and
 FEMA Special Flood Hazard Areas**





TEHAMA COUNTY FLOOD MITIGATION PLAN



LEGEND:

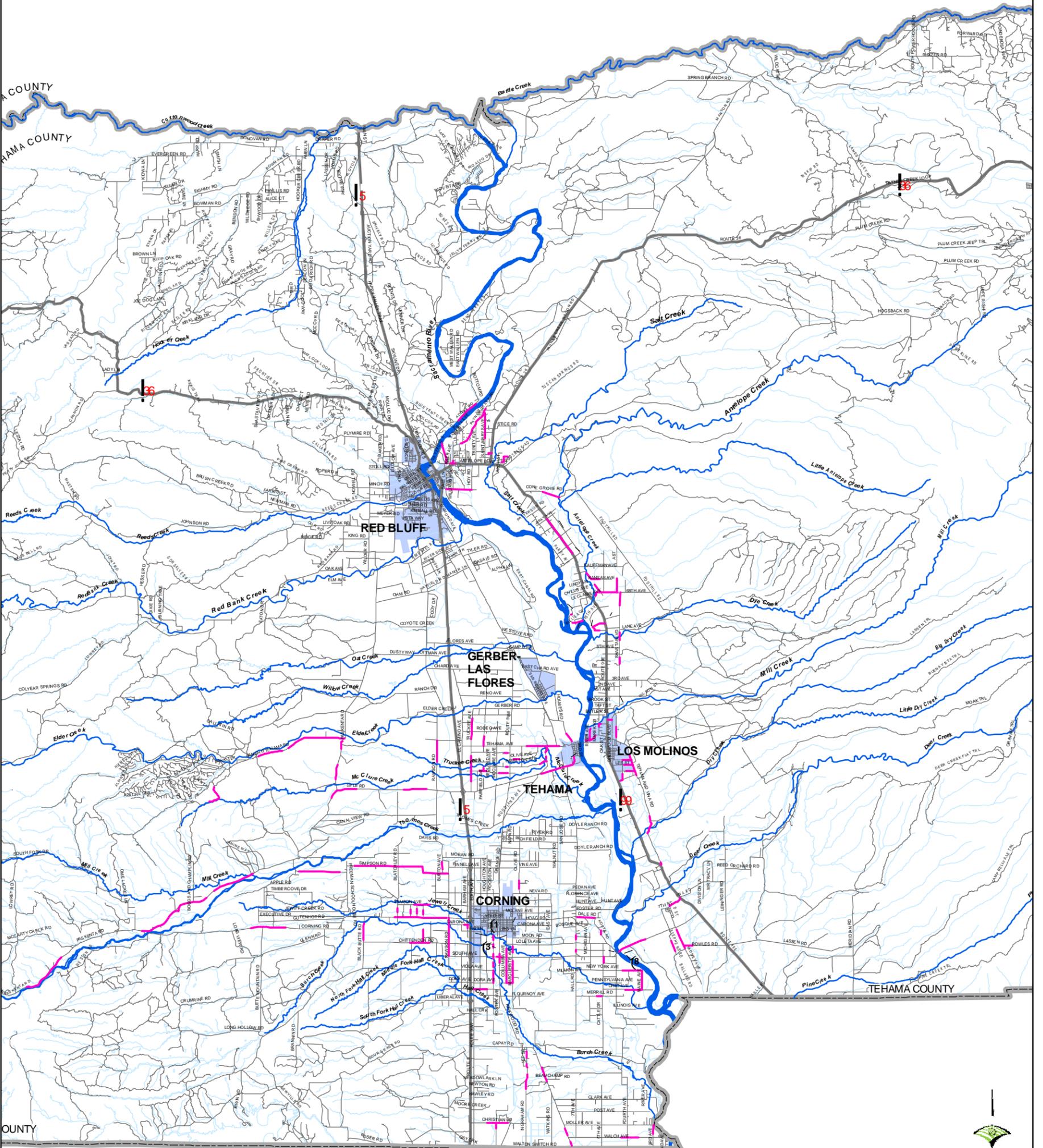
- SINGLE EVENT LOSS PROPERTY (TEHAMA COUNTY)
- TOTAL REPETITIVE LOSS PROPERTY (TEHAMA COUNTY) 66 CLAIMS PAYMENT \$956,099
- INDIVIDUAL REPETITIVE LOSS LOCATIONS
- TOTAL SINGLE EVENT LOSS PROPERTY (TEHAMA COUNTY) 191 CLAIMS PAYMENT \$1,956,099
- A-NO BASE ELEVATIONS DETERMINED
- AE-BASE FLOOD ELEVATIONS DETERMINED
- AO-DEPTHS OF 1 TO 3 FEET (USUALLY SHEET FLOW); AVERAGE DEPTHS DETERMINED
- XF-AREA OF 500-YEAR FLOOD

- Sources:
1. County Boundary, Highways, Cities: California Spatial Information Library, 1997-2002.
 2. Roads, Water, DSRs, Cities: Tehama County Transportation Commission, 2005-2006.
 3. FEMA Special Flood Hazard Areas: FEMA FIRMS.

**FEMA Repetitive/Single Event Losses
and
FEMA Special Flood Hazard Areas**

MAP 14





TEHAMA COUNTY FLOOD MITIGATION PLAN



LEGEND:
 LOCALIZED ROAD FLOODING

- Sources:**
1. County Boundary, Highways, Cities: California Spatial Information Library, 1997-2002.
 2. Roads, Water, DSHs, Cities: Tehama County Transportation Commission, 2005-2006.
 3. FEMA Special Flood Hazard Areas: FEMA FIRMS.

MAP 15
 Localized Road Flooding



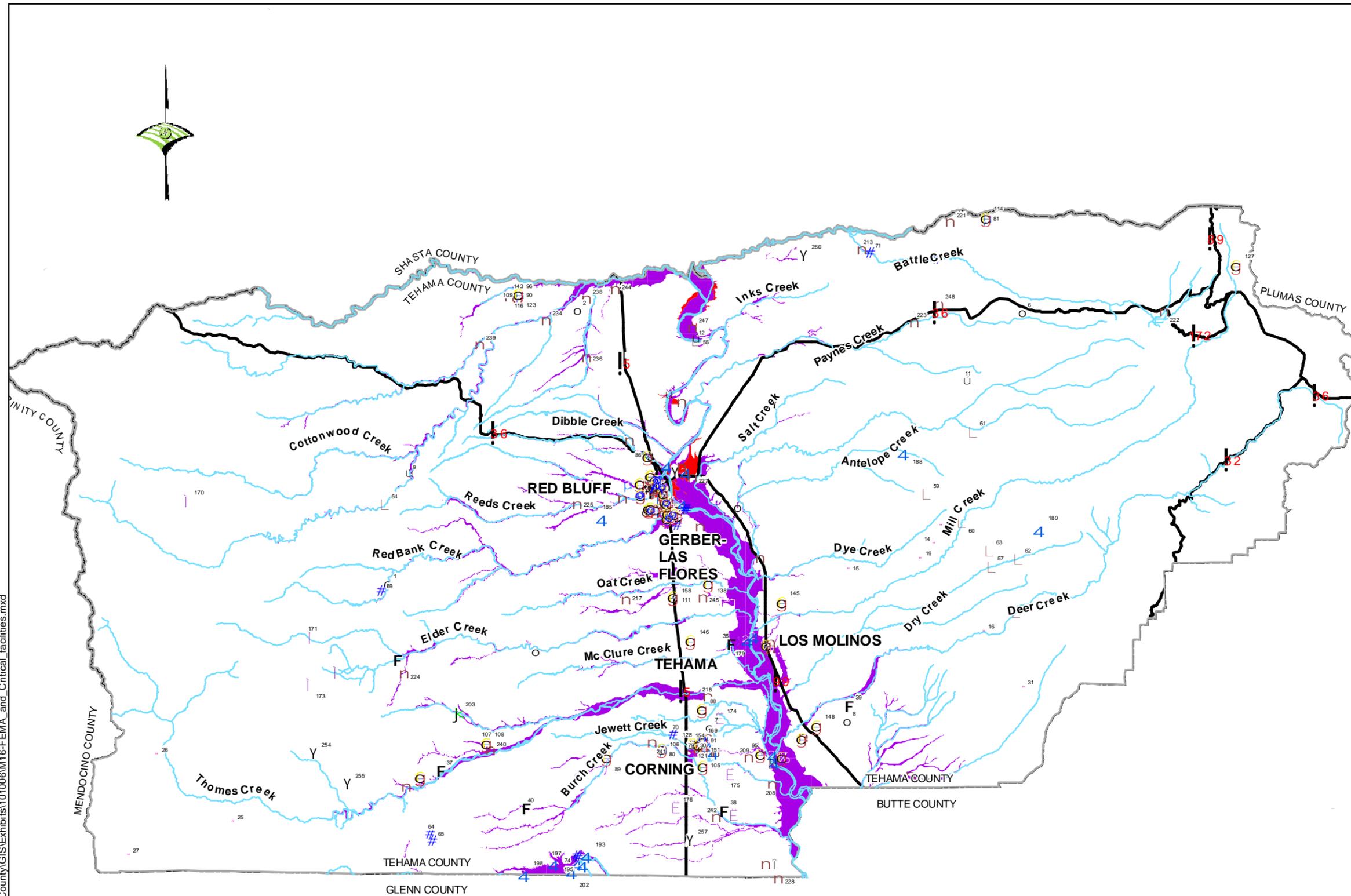
TEHAMA COUNTY FLOOD MITIGATION PLAN



LEGEND:

- HOSPITAL
- TRAIN STATION
- HAZARDOUS MATERIALS
- POLICE OR FIRE STATION
- BUS STATION
- AIRPORT
- BRIDGE
- BUILDING
- CEMETERY
- CHURCH
- CROSSING
- DAM
- MINE
- OILFIELD
- PARK
- RESERVE
- SCHOOL/SHELTER
- TOWER
- A-NO BASE ELEVATIONS DETERMINED
- XF-AREA OF 500-YEAR FLOOD

- Sources:
1. County Boundary, Highways, Water: California Spatial Information Library, 1997-2002.
 2. FEMA Q3, Critical Facilities: Tehama County Transportation Commission, 2005.
 3. Remaining Critical Facilities: FEMA HAZUS99, 1999.
 4. DEM for Watershed: U.S. Geological Survey NED 2002.



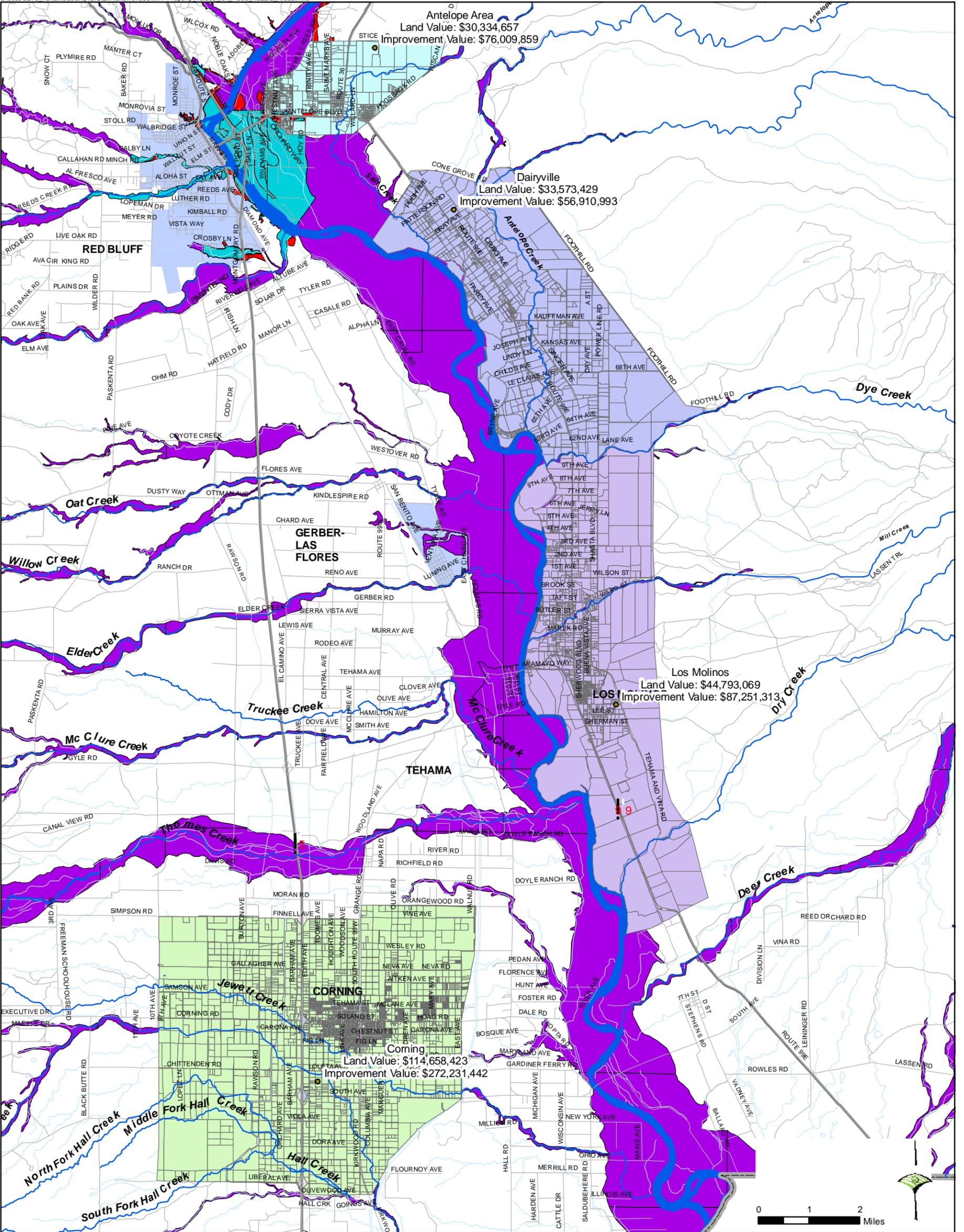
MAP 16

*FEMA Special Flood Hazard Areas
and Critical Facilities*



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0 4 8 Miles



TEHAMA COUNTY FLOOD MITIGATION PLAN



LEGEND:

- ANO BASE ELEVATIONS DETERMINED
- AE-BASE FLOOD ELEVATIONS DETERMINED
- AO-DEPTHS OF 1 TO 3 FEET (USUALLY SHEET FLOW); AVERAGE DEPTHS DETERMINED
- X-F-AREA OF 500-YEAR FLOOD

- Sources:**
1. County Boundary, Highways, Cities: California Spatial Information Library, 1997-2002.
 2. Roads, Water, DSRs, Cities, Assessor's Data: Tehama County Transportation Commission, 2005-2006.
 3. FEMA Special Flood Hazard Areas: FEMA FIRMS.

MAP 17
**Property Values for Flood
Hazard Mitigation Areas**



FORM OF RESOLUTION TO ADOPT THE FMP

INFORMATION ON PUBLIC MEETINGS



Tehama County

co.tehama.ca.us

MEETING AGENDA

DATE: November 23, 2005

TO: Tehama County Flood Mitigation Plan Steering Committee

FROM: Mike Radaideh, Project Manager

SUBJECT: Steering Committee Meeting – Tehama County Flood Mitigation Plan

PURPOSE: To confirm Steering Committee members; discuss the scope of the Tehama County Flood Mitigation Plan; review the list of items needed from the Steering Committee; and discuss public involvement.

DATE: Monday, November 28, 2005

TIME: 10:00 a.m. – 12:00 p.m.

LOCATION: Tehama County Flood Control and Water Conservation District
9380 San Benito Avenue
Gerber, California 96035-9701

- DISCUSSION:**
1. Confirm Steering Committee Membership
 2. Scope, Format, and Schedule of the Tehama County Floodplain Management Plan
 3. Public Involvement
 4. List of Items Needed from the Steering Committee
 5. Action Items
 6. Next Meeting



DATE: November 28, 2005
TO: Tehama County Steering Committee
FROM: Mike Radaideh, Project Manager
SUBJECT: Needed Information, data, review, photographs, etc.

1. Areas of historical flooding
2. Road inundation maps
3. Photographs of historical flooding
4. Damage Survey Reports
5. Review critical facilities and shelters list
6. Review weather stations list
7. Dam inundation maps
8. Aerial maps
9. Major fire events (studies, photos, effect on runoff, etc.)
10. County General Plan
11. Relevant studies
12. Field visits



WOOD RODGERS

MEETING NOTES

DATE: November 30, 2005

TO: Tehama County Steering Committee

FROM: Mike Radaideh, Project Manager

SUBJECT: Tehama County Flood Mitigation Plan (8278.001) – Kick-Off Steering Committee Meeting, November 28, 2005, Meeting Notes

Purpose: To discuss Steering Committee membership; the scope of the Flood Mitigation Plan (FMP); the list of items needed from the Steering Committee; and the public involvement process and announcements.

Attendees: See attached Meeting Attendance Record

Location: 9380 San Benito Ave
Gerber, CA 96035

Handouts: The following materials were distributed:

- Meeting Agenda
- Federal Emergency Management Agency (FEMA) Flood Mitigation Assistance (FMA) Program Brochure
- List of Critical Facilities and a GIS Map Corresponding to the List
- Proposed Media Release and Public Meeting Invitation

Discussion: Following is a summary of the discussions and action items covered during the meeting:

1. Confirm Steering Committee Membership

Members in attendance all agreed to participate in the remaining Steering Committee meetings and to allow the next meeting to be open for additional members so that a broader representation of the watershed conservancies is obtained.

2. Scope, Format, and Schedule of the Tehama County Flood Mitigation Plan

Ernie Ohlin and Wood Rodgers discussed the Disaster Mitigation Act of 2000 (DMA 2000) and how the FMP will be formatted to be integrated into a Local Hazard Mitigation Plan (LHMP). Wood Rodgers provided an overview of the funding mechanisms that the County might be eligible for once the FMP is completed, such as the Flood Mitigation Assistance (FMA) Program and Pre-Disaster Mitigation (PDM) Program. Wood Rodgers also explained the

sections of the FMP; such as the risk assessment and flood mitigation measures sections, and the necessity for a public involvement process.

Wood Rodgers also discussed the California Governor's Office of Emergency Services (OES) and the Federal Emergency Management Agency's (FEMA) review process for the FMP.

Ernie suggested incorporating floodplain mapping done by DWR (Awareness Mapping Program) and NRCS on one figure with that done by FEMA.

3. Public Involvement

Members of the Steering Committee proposed having two initial public meetings in two locations within the county instead of one to optimize the public's involvement process.

The following dates were proposed for the two initial public meetings:

- Wednesday January 18, 2006 at 6:00 p.m., at Lassen Elementary School or the Los Molinos Veteran Hall
- Wednesday January 25, 2006 at 6:00 p.m., at the Veteran's Hall in Corning.

4. List of Items Needed from the Steering Committee

Wood Rodgers presented the need to identify flood hazard areas within Tehama County and identify possible mitigation measures. The following items were discussed:

- Areas of historical flooding.
- Road inundation maps.
- Photographs of historical flooding.
- Damage Survey Reports.
- Review critical facilities and shelters list.
- Review weather stations list.
- Dam inundation maps.
- Aerial maps.
- Major fire events (studies, photos, effect on runoff, etc.).
- County General Plan.
- Relevant studies.
- Field visits.

5. Action Items

Presented on Table 1 is a list of the Action Items.

6. Next Steering Committee Meeting

Wednesday, December 28, 2005 at 10:00 a.m., at 1740 Walnut Street in Red Bluff

Attachments

TABLE 1

**ACTION ITEMS
November 28, 2005**

Ernie Ohlin	Provide County Board of Supervisors Resolution for Emergency Response Policy.
	Provide Repetitive Damage Properties GIS Layer.
	Provide APN GIS Data
David Hayward	Provide locations of NRCS and County Damage Survey Reports.
Dennis Garton	Provide CD including the multi-hazard response plan and response chart.
	Monitor list of invitations to the public meetings to avoid redundancies or omissions.
	Review the flow and weather stations lists and provide information regarding trigger flows and levels for emergency evacuation.
	Provide a list of shelters in coordination with the Red Cross and Salvation Army.
Ernie and Dennis	Provide a link from the Sheriff's Website to the County's Website for information of the FMP.
Ernie, David, Dennis, and Dan	Review the critical facilities list and map to identify and correct discrepancies; highlight inactive facilities that should be removed from the list; and any missing facilities that should be added.
	Review the media release and public meetings invitation.
Wood Rodgers	Update sign-up sheet to include P.O. Box and a column for checking interest in membership in the Steering Committee.
	Revise map showing FEMA floodplains to include AE Hazard Areas.
	Complete and e-mail meeting notes.
	Update the media release and public meetings invitation with comments to be received from the Steering Committee.
	Update maps and lists with comments received from the Steering Committee members.
	E-mail electronic files of the critical facilities list and map to the group.



WOOD RODGERS

MEETING AGENDA

DATE: December 23, 2005

TO: Tehama County Flood Mitigation Plan Steering Committee

FROM: Mike Radaideh, Project Manager

SUBJECT: Tehama County Flood Mitigation Plan (8278.001) –Steering Committee Meeting, December 28, 2005

Purpose: To confirm Steering Committee membership; discuss the scope of the Tehama County Flood Mitigation Plan; review the action items list from the November 23rd Steering Committee meeting; and discuss public involvement.

Time: 10:00 a.m. – 12:00 p.m.

Location: 1740 Walnut Street
Red Bluff, California 96080-3667

- Discussion:
1. Confirm Steering Committee Membership
 2. Scope, Format, and Schedule of the Tehama County Floodplain Management Plan
 3. Public Involvement Presentation and Process
 4. List of Items Needed from the Steering Committee
 5. Review of November 23, 2005 Meeting Notes and Action Items
 6. Next Meeting



WOOD RODGERS

MEETING NOTES

DATE: January 3, 2006

TO: Tehama County Steering Committee

FROM: Fran Borcalli, Project Manager

SUBJECT: Tehama County Flood Mitigation Plan (8278.001) – Kick-Off Steering Committee Meeting, December 28, 2005, Meeting Notes

Purpose: To discuss Steering Committee membership; the scope of the Flood Mitigation Plan (FMP); the list of items needed from the Steering Committee; and the public involvement process and announcements.

Attendees: See attached Meeting Attendance Record

Location: 1740 Walnut Street
Red Bluff, CA 96080

Handouts: The following materials were distributed:

- Meeting Agenda
- November 28, 2005 meeting notes
- Federal Emergency Management Agency (FEMA) Flood Mitigation Assistance (FMA) Program Brochure
- Copy of GIS maps developed for the FMP
- Proposed Media Release and Public Meeting Invitation

Discussion: Following is a summary of the discussions and action items covered during the meeting:

1. Confirm Steering Committee Membership

Members in attendance agreed to participate in the Steering Committee. Other potential members will be confirmed at the next Steering Committee meeting, scheduled for January 19, 2006 at 5:00, an hour before the public meeting.

2. Scope, Format, and Schedule of the Tehama County Flood Mitigation Plan

Ernie Ohlin and Wood Rodgers discussed the Disaster Mitigation Act of 2000 (DMA 2000) and how the FMP will be formatted to be integrated into a Local Hazard Mitigation Plan (LHMP). Wood Rodgers provided an overview of the funding mechanisms that the County might be eligible for once the FMP is completed, such as the Flood Mitigation Assistance (FMA) Program and Pre-Disaster Mitigation (PDM) Program. Wood Rodgers also presented the main

topics to be included in the FMP; such as the risk assessment and flood mitigation measures sections, and the necessity for a public involvement process.

Wood Rodgers also discussed the California Governor's Office of Emergency Services (OES) and the Federal Emergency Management Agency's (FEMA) review process for the FMP.

Ernie suggested incorporating floodplain mapping done by DWR (Awareness Mapping Program) and NRCS on one figure with that done by FEMA.

3. Public Involvement

The upcoming two public meetings were discussed, scheduled for January 19 and 24th, 2006. Copies of the proposed PowerPoint presentation was provided by Wood Rodgers for review by the Committee. Several comments were received and will be reflected in the final presentation.

The following dates and locations were confirmed for the public meetings:

- Thursday January 19, 2006 at 6:00 p.m., at Lassen View Elementary School
- Wednesday January 25, 2006 at 6:00 p.m., at the Veteran's Hall in Corning.

4. List of Items Needed from the Steering Committee

Wood Rodgers presented the need to identify flood hazard areas within Tehama County and identify possible mitigation measures. The following items were discussed:

- Areas of historical flooding.
- Road inundation maps.
- Photographs of historical flooding.
- Damage Survey Reports.
- Review critical facilities and shelters list.
- Review weather stations list.
- Dam inundation maps.
- Aerial maps.
- Major fire events (studies, photos, effect on runoff, etc.).
- County General Plan.
- Relevant studies.
- Field visits.

Wood Rodgers proposed to have the FMP based on water courses rather than watersheds, which will lead to a more focused discussion relating to the main flooding problems and propose practical mitigation measures. Members of

the Steering Committee agreed that would serve the goals of the plan better and committed to providing the necessary input for flood hazard risk identification and proposed mitigation measures.

5. Action Items

Presented on Table 1 is a list of the Action Items.

6. Next Steering Committee Meeting

Thursday, January 19, 2006 at 5:00 pm, at Lassen View Elementary School

Attachments

TABLE 1
ACTION ITEMS
November 28, 2005

Ernie Ohlin	Provide Repetitive Damage Properties GIS Layer.
	Provide APN GIS Data
	Will provide a CD with historical flooding photos for use in the report
David Hayward	Provide locations of NRCS and County Damage Survey Reports.
Dennis Garton	Provide CD including the multi-hazard response plan and response chart.
	Monitor list of invitations to the public meetings to avoid redundancies or omissions.
	Review the flow and weather stations lists and provide information regarding trigger flows and levels for emergency evacuation.
	Provide a list of shelters in coordination with the Red Cross and Salvation Army.
Ernie and Dennis	Provide a link from the Sheriff's Website to the County's Website for information of the FMP.
Dennis	Review the critical facilities list and map to identify and correct discrepancies; highlight inactive facilities that should be removed from the list; and any missing facilities that should be added.
	Review the media release and public meetings invitation.
Wood Rodgers	
	Revise map showing FEMA floodplains to include AE Hazard Areas.

TABLE 1

**ACTION ITEMS
November 28, 2005**

	Complete and e-mail meeting notes.
	Update the media release and public meetings invitation with comments to be received from the Steering Committee.
	Will bring a map showing the DWR Awareness Mapping done for Tehama County.
	Will update the PowerPoint presentation with comments received from the Steering Committee
	Will forward examples from the Butte FMP of the narrative one or two paragraph description of the watersheds.
DWR	Todd will confirm the watershed boundaries and names.
Burt	Will provide a description for each of the watersheds.
Burt and the rest of the group	Will visit Ernie's office to point on a map Ernie will have to identify flood prone areas and discuss the potential mitigation measures.



WOOD RODGERS

MEETING AGENDA

DATE: August 18, 2006

TO: Tehama County Flood Mitigation Plan Steering Committee

FROM: Francis E. Borcalli, P.E., Project Manager

SUBJECT: Tehama County Flood Mitigation Plan (8278.001) –Steering Committee Meeting, August 18, 2006

Purpose: To review the administrative draft of the FMP and discuss the schedule and process for completing the process.

Time: 9:00 a.m. – 11:00 p.m.

Location: 9380 San Benito Ave.
Gerber, California 96035-9701

Discussion:

1. Discuss comments on the Administrative Draft Report with attention on the Action Program
2. Review schedule for public meetings and noticing
3. Review schedule for completing FMP
4. Other

J:\Jobs\8278_TehamaCounty\Civil\Docs\FMP-8278.001\Steering Committee\Agendas\Steering Committee - Agenda 8-18-06.doc

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MEETING ATTENDANCE RECORD

Date: 8/18/06		Project: Tehama County Flood Mitigation Plan	
Time: 9:00 a.m.		Location: 9380 San Benito Avenue, Gerber, CA	
Name	Organization	Address	In Attendance Please Initial
Fran Borcalli	Wood Rodgers, Inc.	Street: 3301 C Street P.O. Box: _____ City/State/ZIP: Sacramento, CA 95816 Tel: 916-326-5224 Fax: 916-341-7767 E-Mail: fborcalli@woodrogers.com	
Burt Bundy	Sacramento River Conservation Area Forum	Street: 2440 Main Street P.O. Box: _____ City/State/ZIP: Red Bluff, CA 96080 Tel: 530-528-7411 Fax: 530-528-7422 E-Mail: bundy@water.ca.gov	
Dan Burns	CA Dept. of Forestry & Fire Protection	Street: 604 Antelope Blvd. P.O. Box: _____ City/State/ZIP: Red Bluff, CA 96080 Tel: 530-833-5562 Fax: 530-833-5352 E-Mail: dan.burns@fire.ca.gov	
Dennis Garton	Tehama County Sheriff's Dept.	Street: _____ P.O. Box: P.O. Box 729 City/State/ZIP: Red Bluff, CA 96080 Tel: 530-529-7950 Fax: 530-529-7933 E-Mail: dgarton@tehamaso.org	
Dave Hayward	Tehama County Public Works	Street: 9380 San Benito Avenue P.O. Box: _____ City/State/ZIP: Gerber, CA 96035 Tel: 530-385-1462 Fax: 530-385-1189 E-Mail: david@pobox.tco.net	
Todd Hillaire	CA DWR	Street: 2440 Main Street P.O. Box: _____ City/State/ZIP: Red Bluff, CA 96080 Tel: 530-528-7347 Fax: _____ E-Mail: hillaire@water.ca.gov	
Brandon Konicke	Tehama County Flood Control & WCD	Street: 9380 San Benito Avenue P.O. Box: _____ City/State/ZIP: Gerber, CA 96035 Tel: 530-385-1462 Fax: 530-385-1189 E-Mail: konicke@tco.net	



WOOD RODGERS
DEVELOPING INNOVATIVE DESIGN SOLUTIONS

MEETING ATTENDANCE RECORD

Date: 8/18/06 Project: Tehama County Flood Mitigation Plan
Time: 9:00 a.m. Location: 9380 San Benito Avenue., Gerber, CA

Name	Organization	Address	In Attendance Please Initial
James Little	Tehama County Building & Safety Dept.	Street: <u>444 Oak Street</u> P.O. Box: _____ City/State/ZIP: <u>Red Bluff, CA 96080</u> Tel: <u>530-527-7002</u> Fax: <u>530-527-2655</u> E-Mail: <u>jlittle@co.tehama.ca.us</u>	
Ernie Ohlin	Tehama County	Street: <u>9380 San Benito Avenue</u> P.O. Box: _____ City/State/ZIP: <u>Gerber, CA 96035</u> Tel: <u>530-385-1462</u> Fax: <u>530-385-1189</u> E-Mail: <u>ernie@tco.net</u>	
Carolyn Steffan	City of Tehama	Street: _____ P.O. Box: <u>P.O. Box 70</u> City/State/ZIP: <u>Tehama, CA 96090</u> Tel: <u>530-384-1501</u> Fax: <u>530-384-1625</u> E-Mail: <u>Tehama@theskylean.com</u>	
Jim Troehler	CDF/TCFD	Street: <u>604 Antelope Blvd.</u> P.O. Box: _____ City/State/ZIP: <u>Red Bluff, CA 96080</u> Tel: <u>530-528-5199</u> Fax: <u>530-528-8538</u> E-Mail: <u>Jim.troehler@fire.ca.gov</u>	
Jeff Twitchell	Wood Rodgers, Inc.	Street: <u>3301 C Street</u> P.O. Box: _____ City/State/ZIP: <u>Sacramento, CA 95816</u> Tel: <u>916-326-5229</u> Fax: <u>916-341-7767</u> E-Mail: <u>jtwitchell@woodrodgers.com</u>	
		_____ _____ _____ _____	
		_____ _____ _____ _____	

PRESS RELEASE

TEHAMA COUNTY FLOOD CONTROL MITIGATION PLAN PLANNING PROCESS UNDERWAY

Tehama County is sponsoring the development of a Countywide Flood Mitigation Plan to identify areas of repetitive flooding, assemble County resources in addressing potential flooding hazards, identify potential mitigation measures, and to possibly obtain reduction in flood insurance premiums under the FEMA National Flood Insurance Program's Community Rating System (CRS).

In a CRS community, the cost of flood insurance for residents is reduced based on the number of flood reduction activities it undertakes and the points it receives by FEMA for those activities. Discounts on premiums vary based on the actions in each community.

Interested citizens can become part of this important planning process by attending one of the two upcoming public meetings. Local citizens are encouraged to participate in the process by providing information concerning local flooding problems. The County needs the experience, knowledge, and suggestions of the local citizens to efficiently address flooding problems in the future. The public is invited to share their experience and to learn more about the flood mitigation planning process. The meetings will be held on January 19, 6:00 P.M. to 7:30P.M. at the Lassen View School, and on January 24, 6:00 P.M. to 7:30 P.M. at the Corning Vets Hall.

END



**PUBLIC MEETING
ATTENDANCE RECORD**

**TEHAMA COUNTY
FLOOD MITIGATION PLAN
JANUARY 19, 2006**

NAME	ORGANIZATION	ADDRESS
<p>Carolyn Steffan Carolyn Steffan</p>	<p>City of Tehama</p>	<p>Street: 460 C P.O. Box 70 City/State/ZIP: Tehama, CA 96090 Tel: 530-384-1501 Fax: 530-384-1625 E-Mail: tehama@theskybeam.com</p>
<p>DENNIS Dennis Garton Garton</p>	<p>TEHAMA SHERIFF- Undersheriff</p>	<p>Street: 1425 502 OAK City/State/ZIP: Red Bluff Tel: 530 529-2950 530-529-7950 Fax: PO Box 729/502 Oak Street E-Mail: Red Bluff, Ca 96080</p>
<p>DAVE Hayward</p>	<p>T.C.P.W. Tehama County Public Works</p>	<p>Street: 9380 SAN BENITO AVE. City/State/ZIP: Gerber, Ca 96035 Tel: 530 385-1462 Fax: E-Mail:</p>
<p>THOMAS A Burgess</p>		<p>Street: 11770 CRAIG AVE City/State/ZIP: Red Bluff, Ca 96080 Tel: 527-1367 (530) Fax: E-Mail: THOMAS.BURGESS@LP Corp.COM</p>
<p>Cheryl Smith</p>		<p>Street: 24187 Electric Ave City/State/ZIP: Red Bluff CA 96080 Tel: 530 529-1428 Fax: E-Mail: X</p>
<p>Russell B. Skelton</p>		<p>Street: 12220 CRAIG AVE City/State/ZIP: Red Bluff CA 96080 Tel: 530-527-0953 Fax: E-Mail:</p>
<p>Brandon Konicke</p>	<p>TCFC & WCD Tehama County Flood Control & Water Conservation District</p>	<p>Street: 9380 San Benito Ave City/State/ZIP: Gerber, CA 96035-9701 Tel: (530) 385-1462 Fax: E-Mail:</p>
<p>George + Givi Whitney</p>	<p>Woodson Bridge RV Park</p>	<p>Street: 25433 South Ave City/State/ZIP: Corning, CA 96021 Tel: 530-839-2151 Fax: 530-839-2153 E-Mail: Wbruvpark@aol.com</p>



**PUBLIC MEETING
ATTENDANCE RECORD**

**TEHAMA COUNTY
FLOOD MITIGATION PLAN
JANUARY 19, 2006**

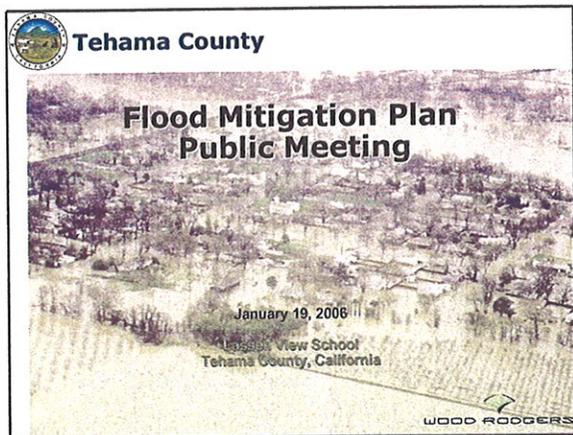
NAME	ORGANIZATION	ADDRESS
Jim LITTLE Mailing Address: PO BOX 458 Red Bluff, Ca 96080	TEHAMA County Buildings Dept	Street: 449 GAVE ST City/State/ZIP: Red Bluff CA 96080 Tel: 530-527-7002 Fax: 530-527-2655 E-Mail: JLITTLE@CO.TEHAMA.CA.US
Dan Burns	CALIF. DEPT. OF FORESTRY + FIRE PROTECTION	Street: 604 Antelope Blvd. City/State/ZIP: Red Bluff, CA 96080 Tel: 530-528-5199 Fax: E-Mail: dan.burns@fire.ca.gov
Todd Hillaire	CALIF. DEPT OF WATER RESOURCES	Street: 2440 MAIN ST. City/State/ZIP: RED BLUFF, CA 96080 Tel: 530-529-7347 Fax: 530-529-7322 E-Mail: hillaire@water.ca.gov
Nellie Lee Barber	CA OES Inland Region	Street: 1740 Walnut St. City/State/ZIP: Red Bluff Ca 96080 Tel: 530-529-0409 Fax: 530-529-5079 E-Mail:
ERNIE OHUN	TEHAMA COUNTY	Street: 9380 SAN BENITO AVE City/State/ZIP: GEBEN, CA 96035 Tel: 530-385-1462 Fax: 530-385-1189 E-Mail: ERNIE@TCO.NET
Allan Fulton		Street: 12873 Hwy 99E City/State/ZIP: Red Bluff, CA 96080 Tel: Fax: E-Mail:
DAVID BICKFORD	U.S. DEPT OF Commerce Dept of Commerce	Street: 24625 CLEMENT AVE. City/State/ZIP: LOS MOLINOS, CA 96055 Tel: 529-3814 (530) Fax: E-Mail: GHOSTCAR@TCO.NET.
Paul Smith	Tehama County	Street: 12075 Craig Av City/State/ZIP: Red Bluff Ca, 96080 Tel: Fax: E-Mail:

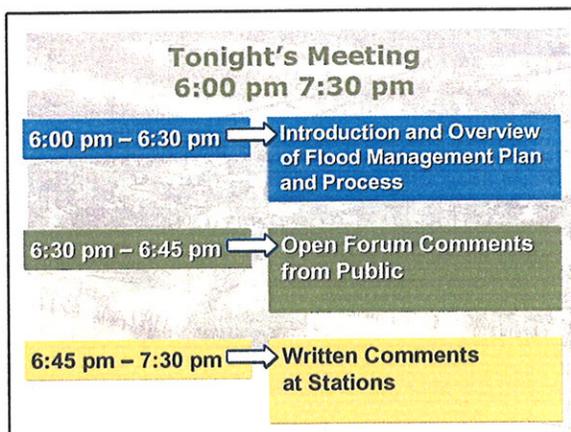


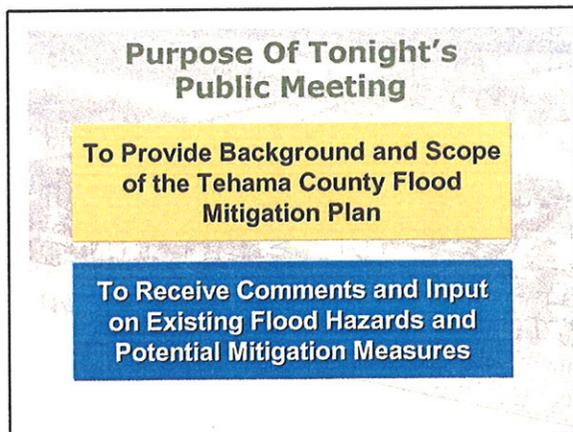
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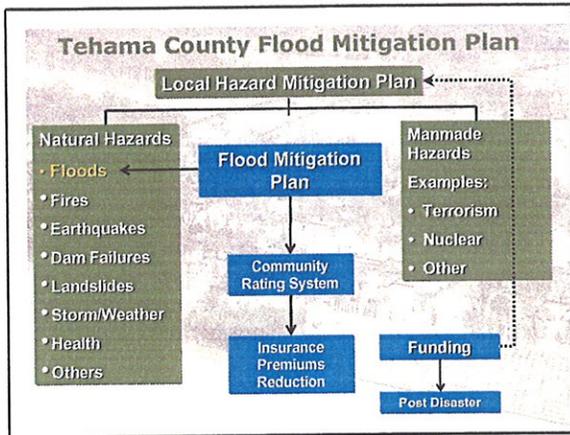
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NAME	ORGANIZATION	ADDRESS
Charles B Coker	LAND OWNER	Street: BUTLER ST City/State/ZIP: 96055 Tel: 384-1214 (530) Fax: E-Mail:
Joe Reynolds	Land owner 25180 64th Ave LOS Molinos, CA 96055	Street: 64th Ave. City/State/ZIP: Los Molinos, CA 96055 Tel: 529-1628 (530) Fax: E-Mail: joer@tco.net
Ron WARNER PO Box 250/332 Pine Street Red Bluff, CA 96080 (OFFICE)	Tehama Co. Superior District 5	Street: 551 2ND ST (Home) City/State/ZIP: TEHAMA, CA, 96090 Tel: 384-1803 (530) Fax: or 530-527-4055 x3010 E-Mail: RONSPRC@NREACH.COM
Diane Reynolds	Land owner	Street: 25180 64th AVE City/State/ZIP: Los Molinos CA 96055 Tel: 529-1628 Fax: E-Mail: diane@tco.net
Don Carlson	LAND OWNER	Street: 10495 65th Ave City/State/ZIP: Los Molinos CA 96055 Tel: Fax: E-Mail:
Steve Cook	LAND OWNER	Street: 10479 65th City/State/ZIP: Los Molinos CA 96055 Tel: Fax: E-Mail:
		Street: City/State/ZIP: Tel: Fax: E-Mail:
		Street: City/State/ZIP: Tel: Fax: E-Mail:







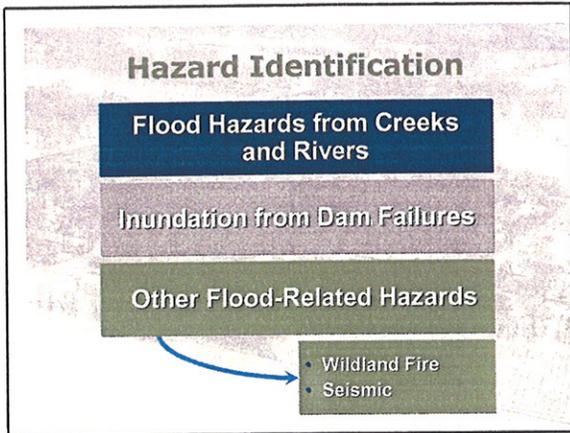


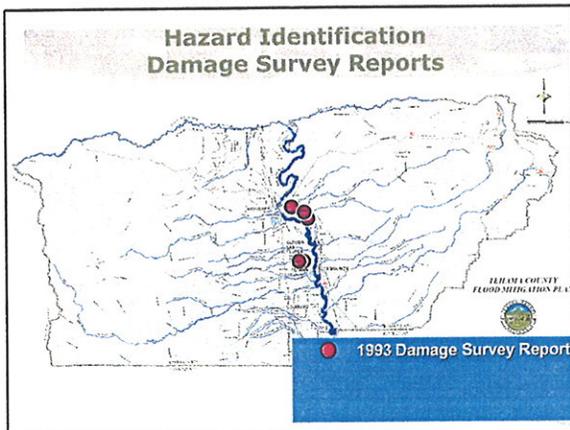
Flood Hazard Mitigation Plan

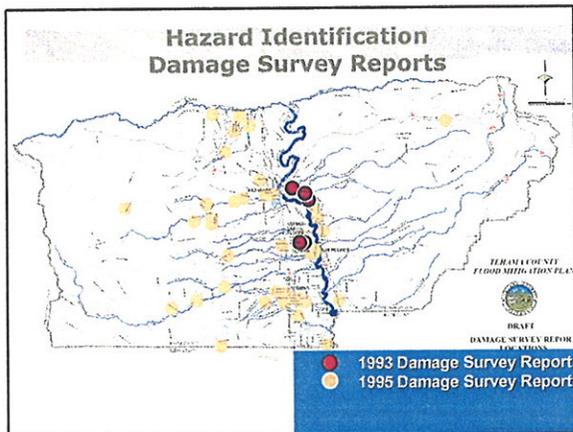
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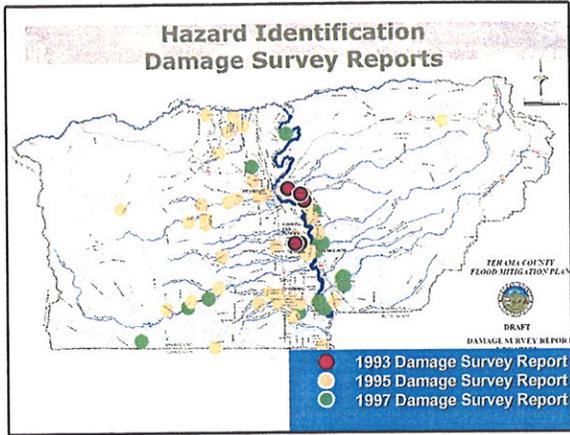
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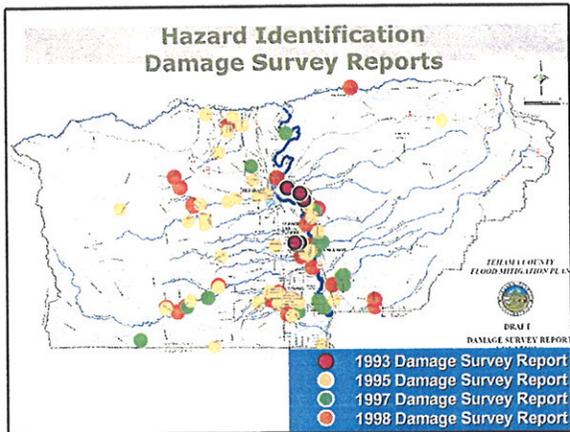
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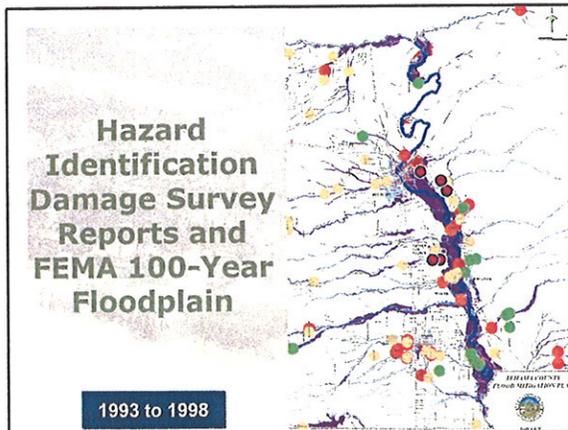








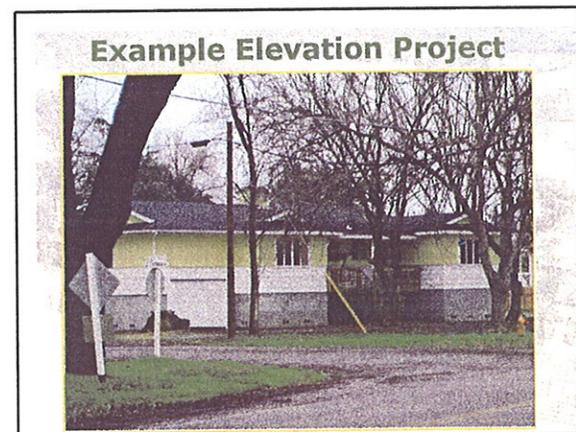




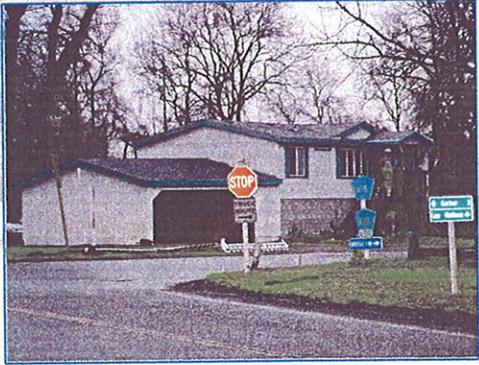
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1997	33	1,513,542
1998	53	868,501

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- Structural and Non-Structural
 - Public Education
 - Emergency Preparedness and Evacuation Planning
 - Storm Water Management
 - Floodproofing
 - Relocation, Acquisition, Elevation



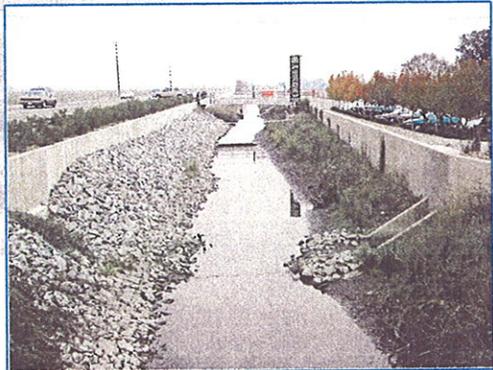
Example Elevation Project

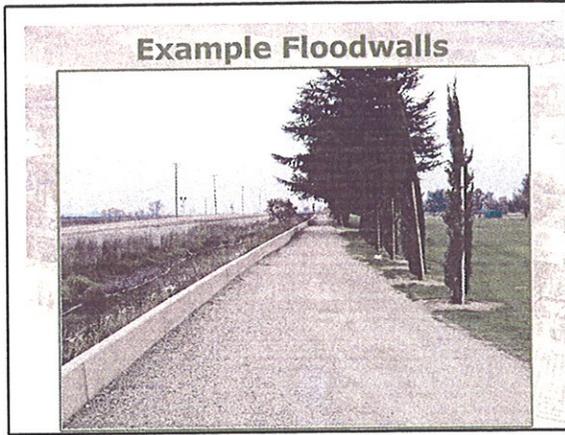


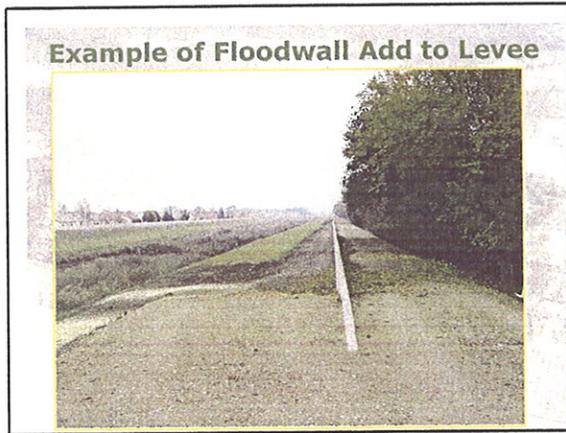
Example Floodwall and Levee Imports

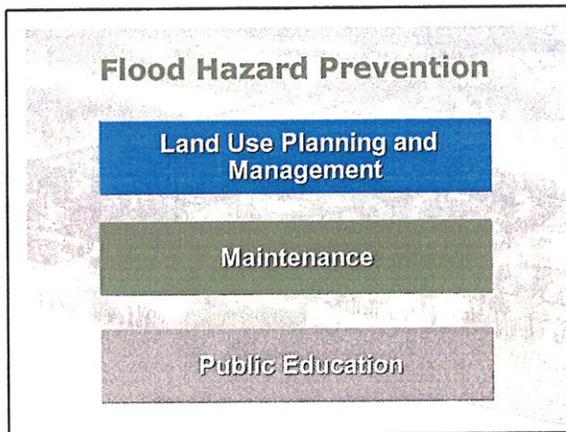


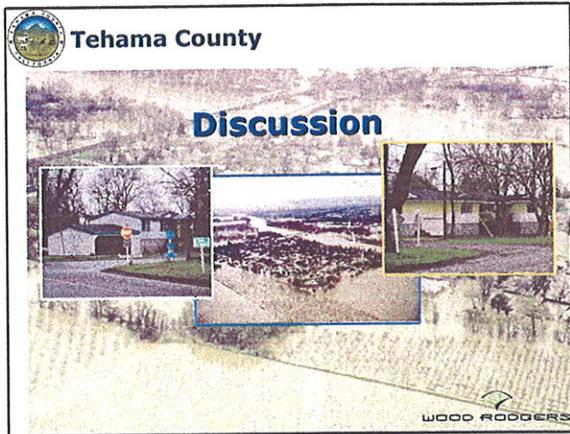
Example Floodwalls













**PUBLIC MEETING
ATTENDANCE RECORD**

**TEHAMA COUNTY
FLOOD MITIGATION PLAN
JANUARY ²⁴ 19, 2006**

NAME	ORGANIZATION	ADDRESS
Iellie Lee Barber	CA OES California Office of Emergency Services - Inland Region	Street: 1740 Walnut City/State/ZIP: Red Bluff, Ca, 96080 Tel: 530-529-0409 Fax: 530-529-5079 E-Mail:
MILT BRUNER	TEHAMA CO. SHERIFF	Street: 502 OAK ST / P.O. BOX 729 City/State/ZIP: RED BLUFF, Ca, 96080 Tel: 529-7930 (530) Fax: E-Mail:
Jim ROEBLER	CDF/TCFD California Dept. of Forestry / Tehama County Fire Dept.	Street: 604 ANTELOPE BLVD City/State/ZIP: RED BLUFF, Ca, 96080 Tel: 528-5199 (530) Fax: E-Mail:
Elizabeth Moses Bill Moses	Indra Individual	Street: 4118 Woodson P.O. Box 691 City/State/ZIP: Corning CA 96021 Tel: 530-824-2848 Fax: E-Mail:
Todd HILLAIRE	CDWR NORTHERN DISTRICT California Dept. of Water Resources	Street: 2440 MAIN ST City/State/ZIP: RED BLUFF, CA 96080 Tel: 530-529-7347 Fax: 530-529-7322 E-Mail: hillaire@water.ca.gov
George + Gwi Whitney	Woodson Bridge RV Park	Street: 25433 South Ave City/State/ZIP: Corning, Ca 96021 Tel: 530-839-2151 Fax: E-Mail:
Ron + Dee Meyer	25433 South Ave Corning, Ca 96021	Street: 25433 South Ave City/State/ZIP: Corning, Ca, 96021 Tel: 530-839-2389 Fax: E-Mail:
Louie Davies		Street: 721 Solano St City/State/ZIP: Corning, Ca, 96021 Tel: 530-824-3601 Fax: E-Mail:



**PUBLIC MEETING
ATTENDANCE RECORD**

**TEHAMA COUNTY
FLOOD MITIGATION PLAN
JANUARY ²⁴ 19, 2006**

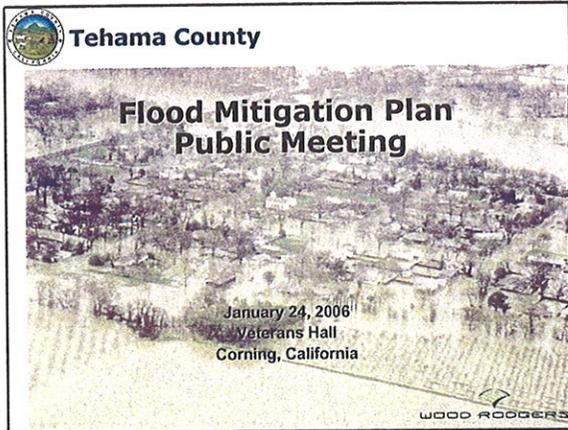
NAME	ORGANIZATION	ADDRESS
William Ripka 4015 Woodson Ave Corning, Calif 96021		Street: 4015 Woodson Ave City/State/ZIP: Corning, Calif, 96021 Tel: 530-824-6151 Fax: E-Mail:
Ross M. Turner 1301 Hoag St Corning CA Supervisor Tehama Co Dist #4	Ross Turner Supervisor District 4 1301 Hoag Street Corning, Ca 96021 530-824-3240	Street: City/State/ZIP: Tel: Fax: E-Mail:
Dave Hayward	T. C. P. W Tehama County Public Works Engineer Tech.III	Street: 9380 San Benito Ave City/State/ZIP: Gerber, Ca 96035 Tel: 530-385-1462 Fax: E-Mail:
Brandon Konicke	TCFC & WCD Tehama County Flood Control & Water Conservation District	Street: 9380 San Benito Ave City/State/ZIP: Gerber, Ca 96035 Tel: 530-385-1462 Fax: E-Mail:
Susan S Leroy Anderson 3738 Illinois Ave. Corning, CA		Street: 3738 Illinois Ave. City/State/ZIP: Corning, CA 96021 Tel: Fax: E-Mail:
Ron Warner	TEHAMA CO BOARD OF SUPERVISORS District 5	Street: PO Box 250/332 Pine Street City/State/ZIP: Red Bluff, Ca 96080 Tel: 530-527-4055 X3016 Fax: or 530-384-1803 E-Mail: ronsplce@inreach.com
Bill Goodwin	Tehama County Admin.	Street: P.O. Box 250/332 Pine Street City/State/ZIP: Red Bluff, Ca 96080 Tel: 530-527-4055 Fax: E-Mail:
Glen Gordon Glen Gordon		Street: 4280 ORANGE AVE City/State/ZIP: 96021, Corning, CA Tel: 530-824-3673 Fax: E-Mail:

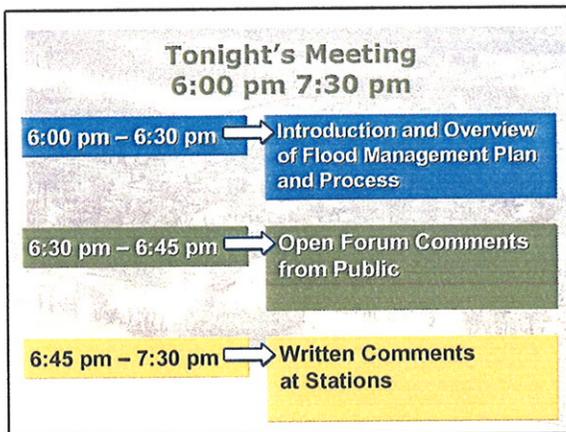


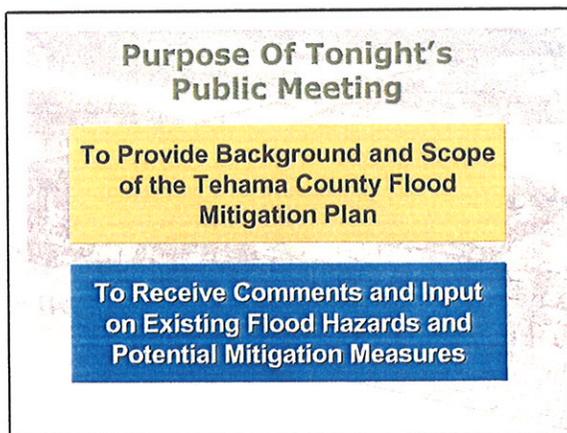
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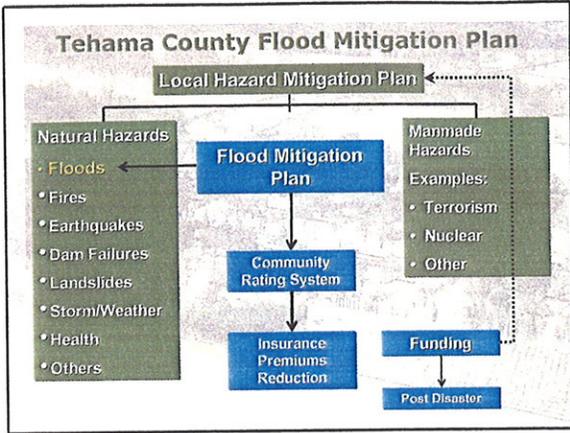
**TEHAMA COUNTY
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NAME	ORGANIZATION	ADDRESS
<p>BRAD PERRAULT Perrault</p>		<p>Street: 22822 EVA WAY City/State/ZIP: CORNING CA 96021 Tel: 530-824-1554 Fax: " " " E-Mail: BRPERRAULT@SBCGLOBAL.NET</p>
<p>Leonard & Rhonda Nunes</p>		<p>Street: 22827 Eva Way City/State/ZIP: Corning Ca. 96021 Tel: 530 824439 Fax: E-Mail:</p>
<p>Angelia Powers</p>		<p>Street: 25433 South Ave City/State/ZIP: Corning, Ca. 96021 Tel: (530) 839-9826 Fax: 0 E-Mail: 0</p>
		<p>Street: City/State/ZIP: Tel: Fax: E-Mail:</p>
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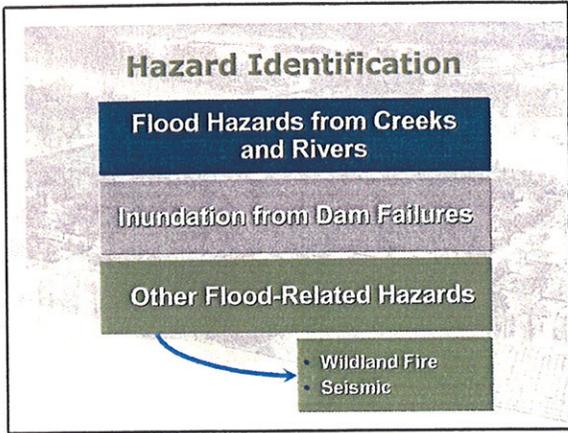


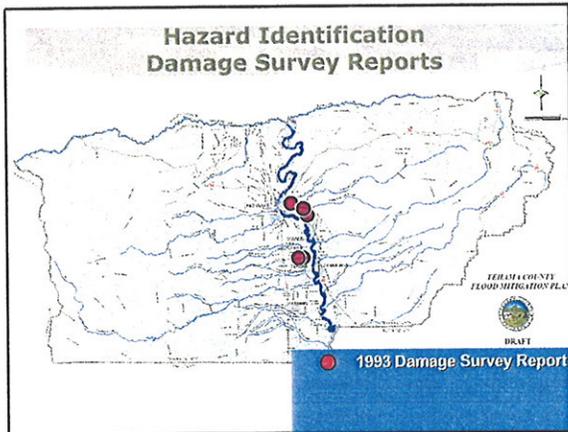
Flood Hazard Mitigation Plan

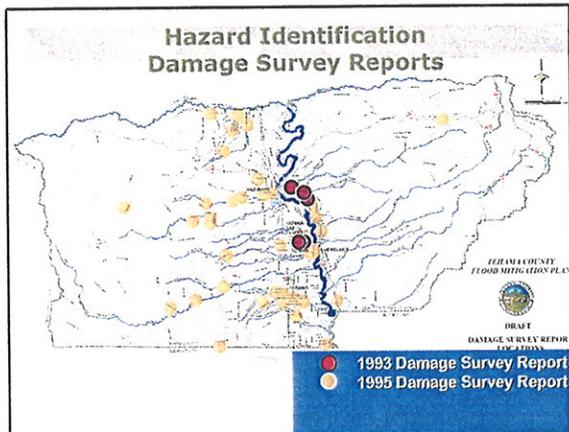
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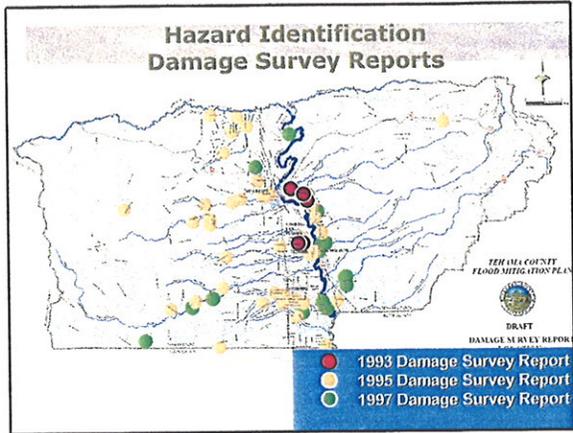
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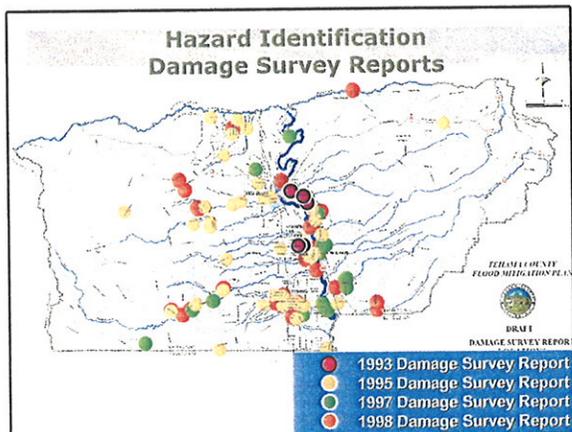
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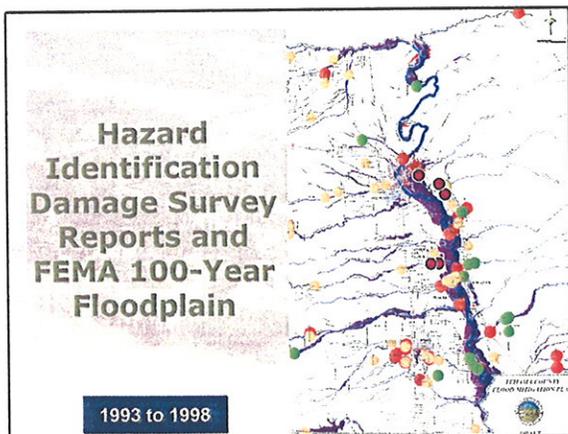












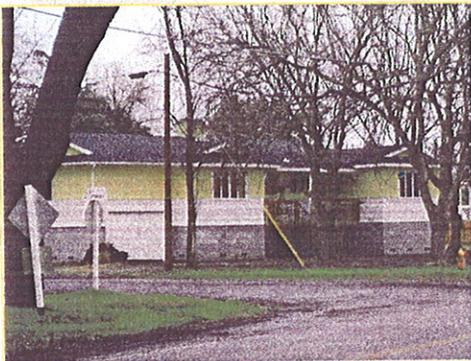
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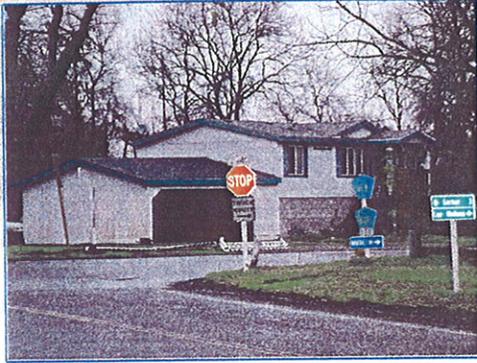
Potential Mitigation Measures

- Structural Measures
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 - Relocation, Acquisition, Elevation

Example Elevation Project



Example Elevation Project

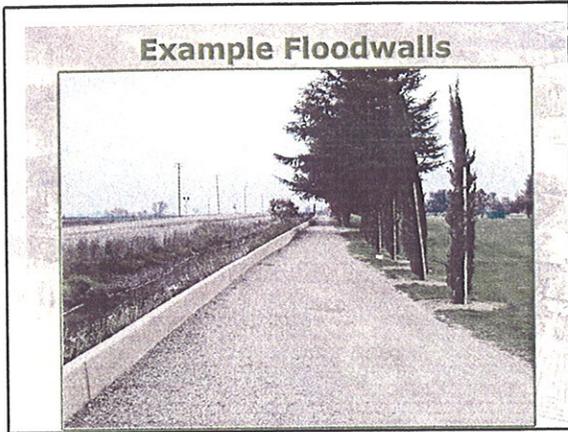


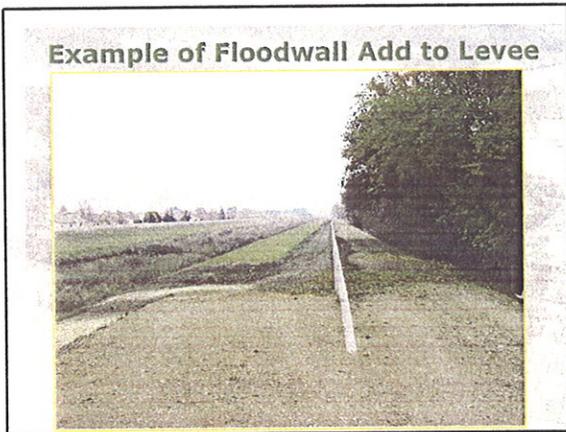
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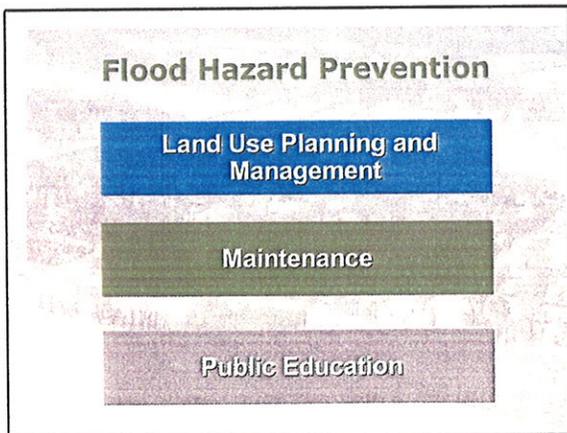


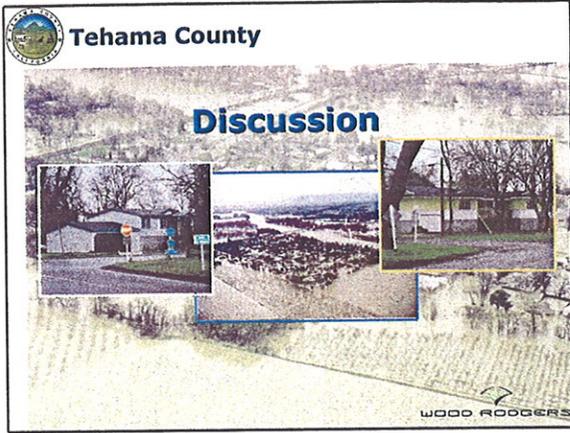
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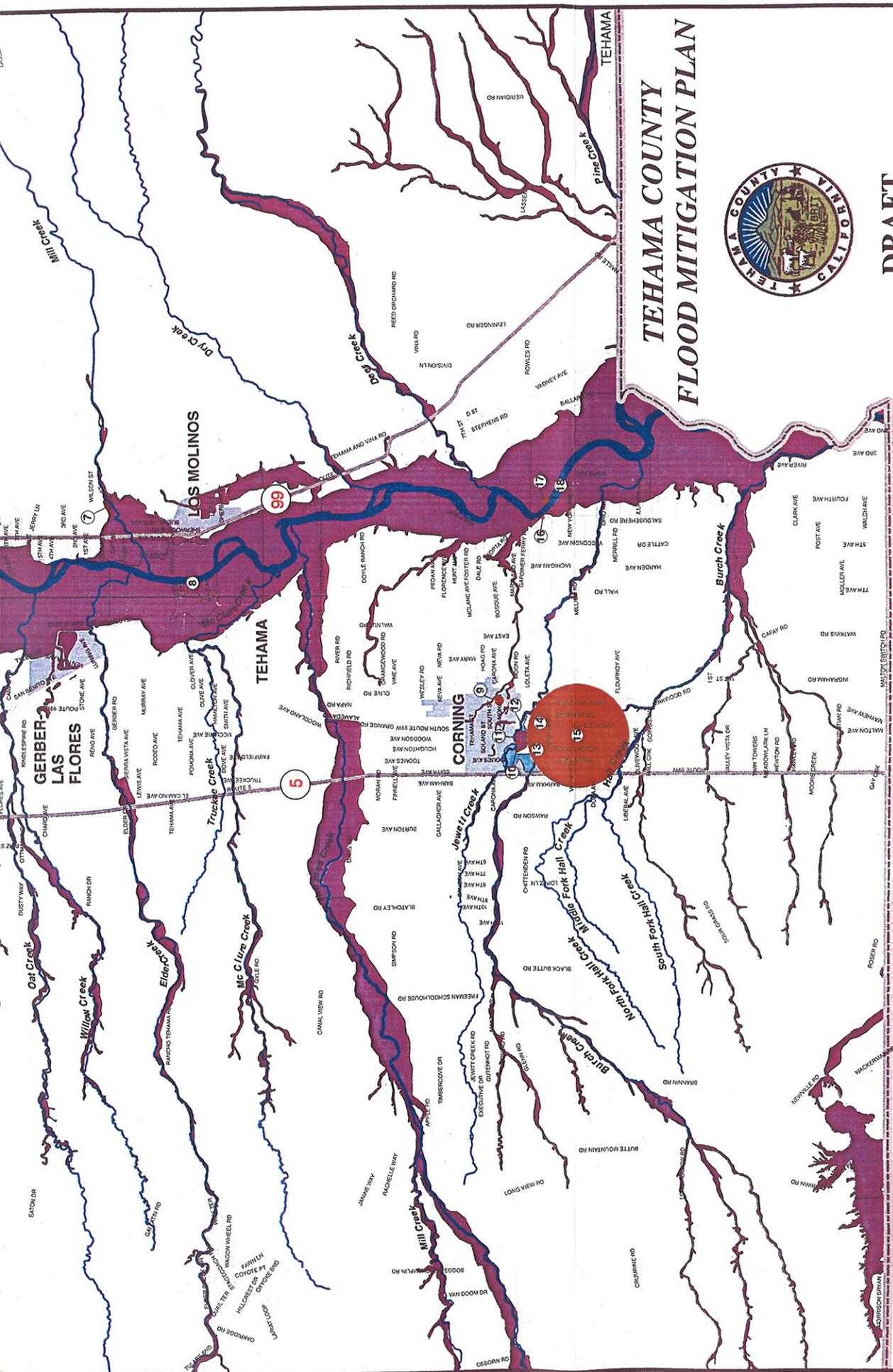






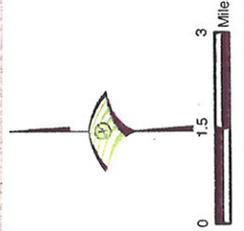






TEHAMA COUNTY FLOOD MITIGATION PLAN

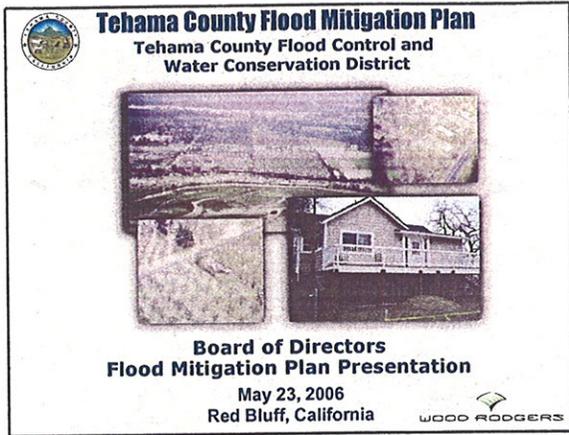
DRAFT DESIGNATED FEMA FLOOD ZONES AND PUBLIC IDENTIFIED FLOOD AREAS



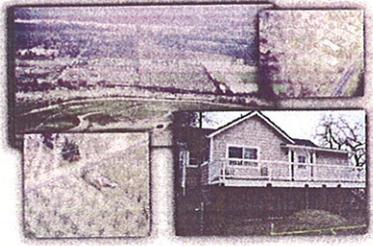
- Flood Zone:**
- A-No Base Elevations Determined
 - AE-Base Flood Elevations Determined
 - AO-Depths Of 1 To 3 Feet (Usually Sheet Flow; Average Depths Determined)
 - XF-Area Of 500-Year Flood
 - Public Identified Flood Areas

SOURCES:
 County Boundary, Highways, Cities, California Spatial Information Library, 1990-2002
 Roads, Water, DSRs, Cities, Tehama County Transportation Commission, 2005-2006
 FEMA SRTAS; FEMA FIRMS

Tehama County
 Flood Mitigation Plan
 Public Meeting



Tehama County Flood Mitigation Plan
 Tehama County Flood Control and
 Water Conservation District

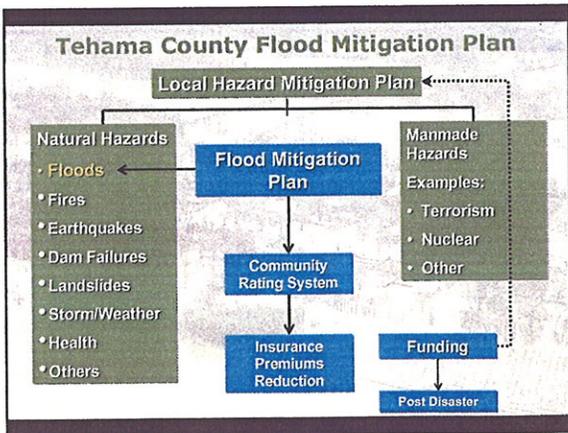


Board of Directors
Flood Mitigation Plan Presentation
 May 23, 2006
 Red Bluff, California

WOOD ROGERS

Tehama County Flood Mitigation Plan Steering Committee

- Ernie Ohlin – Tehama County Flood Control and Water Conservation District
- Burt Bundy – Sacramento River Conservation Area Forum
- Dan Burns – California Department of Forestry and Fire Protection
- Dennis Garton – Tehama County Sheriff's Department
- Dave Hayward – Tehama County Public Works
- Todd Hillaire – California Department of Water Resources
- Brandon Konicke – Tehama County Flood Control and Water Conservation District
- James Little – Tehama County Building and Safety Department
- Carolyn Steffan – City of Tehama
- Jim Troehler – California Department of Forestry/TCFD



Flood Hazard Mitigation Plan

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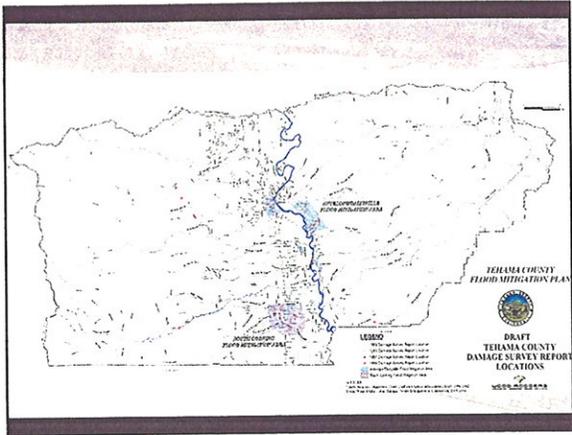
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Public Meetings

- **January 19, 2006 – Lassen View School, Dairyville Area**
- **January 24, 2006 – Veterans Hall, Corning**

Tehama County
Flood Mitigation Plan
Public Meeting



TEHAMA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

AGENDA ITEM NO. 9 AUGUST 22, 2006

Issue: Tehama County Draft Flood Mitigation Plan (FMP)	Backup: Yes
Petitioner: Fran Borcalli - Wood Rodgers, Inc. Ernie Ohlin, Water Resources Manager	
Recommendation: Informational	

FISCAL IMPACT: None

BACKGROUND

The draft Tehama County Flood Mitigation Plan is attached for review and comment. Attention is directed to Section 5.3, "Implementation of Mitigation Actions" and Section 6.0, "Plan Maintenance Process".

The FMP Advisory Committee will review the draft Plan on August 18, 2006. Two Public meetings are scheduled to review the draft Plan. August 29th, 6:30 p.m. at the Lassen View School and August 31st, 6:30 p.m. at the Corning Vets Hall.

Once all comments are received, Wood Rodgers, Inc. will finalize the draft Plan and submit it to OES and FEMA for approval.

Mr. Fran Borcalli will present an overview of the Plan for the Board.

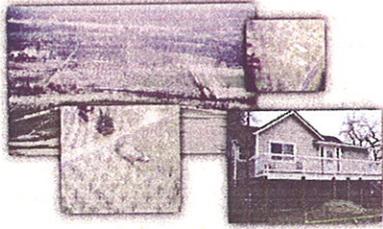
Respectfully Submitted,

Cleared for
Agenda

Ernie Ohlin, Water Resources Manager

9
Agenda Item #

Tehama County Flood Mitigation Plan
Tehama County Flood Control & Water Conservation District
Presentation



August 22, 2006



Goals and Objectives

• **Goal 1: Prevent Future Flood Hazard Related Losses of Life and Property**

- Objective 1.1 - Minimize or eliminate losses to repetitive-loss properties.
- Objective 1.2 - Prevent future development or buildings within or outside a SFHA from incurring flood hazard related losses.
- Objective 1.3 - Prevent future development or buildings from causing flood hazard related losses to other properties.
- Objective 1.4 - Enhance interagency coordination.

Goals and Objectives
(Continued)

• **Goal 2: Increase Public Awareness to Flood Hazard Related Risks**

- Objective 2.1 - Establish and implement a flood hazard outreach program.

• **Goal 3: Improve Emergency Services and Response Capability**

- Objective 3.1 - Develop early warning and flood alert system.

Action Items

- Action No. 1: Formulate Design Criteria and Standards to Handle Storm Runoff Quantity and Quality
- Action No. 2: Prepare Topographic Mapping of Central Tehama County
- Action No. 3: Formulate, Adopt, and Implement Grading Ordinance
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Action Items (Continued)

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Action Item (Continued)

- Action No. 8: Formulate Flood Management Plan for Jewett and Burch Creeks in the Vicinity of Corning
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**PUBLIC MEETING
LASSEN VIEW SCHOOL
ATTENDANCE RECORD**

**TEHAMA COUNTY
FLOOD MITIGATION PLAN
AUGUST 29, 2006**

NAME	ORGANIZATION	ADDRESS
JIM EDWARDS	EDWARDS RANCH	Street: 13038 City/State/ZIP: Hwy 990 Red Bluff CA Tel: 530 527 4285 Fax: 530 527 0405 E-Mail:
Tim Renstrom		Street: 11890 Craig City/State/ZIP: Red Bluff Tel: 527 3489 Fax: E-Mail:
KARL WRIGHT		Street: 12328 CRAIG AVE City/State/ZIP: RED BLUFF, CA. Tel: 527 0847 Fax: E-Mail:
Fred Smith		Street: 11960 Craig Ave City/State/ZIP: Tel: 527-3993 Fax: E-Mail:
Dart Smith	Smith Ranch	Street: 12060 Craig Ave City/State/ZIP: Red Bluff 96080 Tel: 530 527 7141 Fax: E-Mail:
Paul Smith		Street: 12075 Craig Ave City/State/ZIP: Red Bluff Ca 96080 Tel: Fax: E-Mail:
Jack Fennel		Street: 24470 Electric Ave City/State/ZIP: Red Bluff CA 96080 Tel: 530 527 8856 Fax: E-Mail: jfennel@stcg/obul.net
		Street: City/State/ZIP: Tel: Fax: E-Mail:



**PUBLIC MEETING
LASSEN VIEW SCHOOL
ATTENDANCE RECORD**

**TEHAMA COUNTY
FLOOD MITIGATION PLAN
AUGUST 29, 2006**

NAME	ORGANIZATION	ADDRESS
P RUSSELL D. SKELTON	COUNTY of TEHAMA	Street: 24188 ELECTRIC AVE City/State/ZIP: RED BLUFF CA 96080 Tel: (530) 527-9499 Fax: _____ E-Mail: _____
Bettie L. Skelton	Educator	Street: 24188 Electric Ave City/State/ZIP: Red Bluff CA 96080 Tel: 527-9499 Fax: _____ E-Mail: _____
RUSSELL B. SKELTON	RETIRED	Street: 12220 CRAIG AVE City/State/ZIP: RED BLUFF, CA 96080 Tel: (530) 527-0953 Fax: _____ E-Mail: _____
ROBERT L. WILSON	RETIRED	Street: 12270 CRAIG AVE City/State/ZIP: RED BLUFF CA 96080 Tel: 528-0123 Fax: _____ E-Mail: _____
PAULA D. WILSON	RETIRED	Street: 12270 CRAIG AVE City/State/ZIP: RED BLUFF CA 96080 Tel: 530-528-0123 Fax: - E-Mail: -
DAVID BICKFORD	U.S. BUREAU OF COMMERCE	Street: 24625 CLEMENT AVE City/State/ZIP: LOS MOLINOS, CA 96055 Tel: 530-529-3814 Fax: _____ E-Mail: GHOSTCAR @ TEL. NET
Tony Darter	Rancher	Street: Craig Av City/State/ZIP: Red Bluff, Ca 96080 Tel: 529-1927 = 20-0050 Fax: _____ E-Mail: _____
Christine Gates	Educator	Street: Craig Ave City/State/ZIP: 96080 Tel: 529-5107 Fax: _____ E-Mail: _____



**PUBLIC MEETING
LASSEN VIEW SCHOOL
ATTENDANCE RECORD**

**TEHAMA COUNTY
FLOOD MITIGATION PLAN
AUGUST 29, 2006**

NAME	ORGANIZATION	ADDRESS
THOMAS A BURGESS PATRICA E VINDEN		Street: 11770 CRAIG AVE City/State/ZIP: RED BLUFF CA 96080 Tel: 530 527-1367 Fax: E-Mail: THOMAS.BURGESS@LPCORP.COM
Tom McCubbins		Street: 2 SUTTER ST SUITE D City/State/ZIP: Red Bluff CA 96080 Tel: 527-3013 X120 Fax: E-Mail: tom@tehamacountyred.org
Laurie Gordon		Street: 2 SUTTER ST. SUITE D City/State/ZIP: Red Bluff, CA 96080 Tel: 527-3013 X115 Fax: E-Mail: Laurie@tehamacountyred.org
		Street: City/State/ZIP: Tel: Fax: E-Mail:



**PUBLIC MEETING
LASSEN VIEW SCHOOL
ATTENDANCE RECORD**

**TEHAMA COUNTY
FLOOD MITIGATION PLAN
AUGUST 29, 2006**

NAME	ORGANIZATION	ADDRESS
Dale Delphia	Retired	Street: 12250 Wang Ave City/State/ZIP: Red Bluff, CA 96080 Tel: 527-9370 Fax: _____ E-Mail: _____
Anne Bianchi Bianchi Orchards	TCMO -612 nd Ave	Street: 2 FURTER ST City/State/ZIP: Jamul, CA 92044 Tel: 10245 612 nd Ave Fax: Los Molinos E-Mail: anne@tehamacountyred.org
Jeri Hyatt		Street: 12121 Craig City/State/ZIP: Red Bluff, CA Tel: 527-4789 Fax: _____ E-Mail: jeri.hyatt4@aol.com
		Street: _____ City/State/ZIP: _____ Tel: _____ Fax: _____ E-Mail: _____
		Street: _____ City/State/ZIP: _____ Tel: _____ Fax: _____ E-Mail: _____
		Street: _____ City/State/ZIP: _____ Tel: _____ Fax: _____ E-Mail: _____
		Street: _____ City/State/ZIP: _____ Tel: _____ Fax: _____ E-Mail: _____
		Street: _____ City/State/ZIP: _____ Tel: _____ Fax: _____ E-Mail: _____
		Street: _____ City/State/ZIP: _____ Tel: _____ Fax: _____ E-Mail: _____



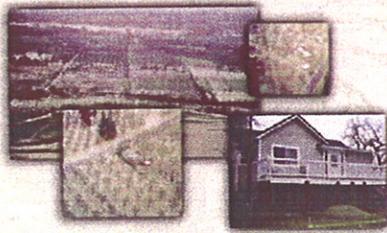
**PUBLIC MEETING
LASSEN VIEW SCHOOL
ATTENDANCE RECORD**

**TEHAMA COUNTY
FLOOD MITIGATION PLAN
AUGUST 29, 2006**

NAME	ORGANIZATION	ADDRESS
Brian Madison		Street: 12334 Craig Ave City/State/ZIP: Red Bluff Ca 96080 Tel: 530-5270-8983 Fax: E-Mail:
Tom McDaniel		Street: 12260 CRAIG AVE City/State/ZIP: Red Bluff CA 96080 Tel: 530-529-0581 Fax: E-Mail:
		Street: City/State/ZIP: Tel: Fax: E-Mail:

Tehama County Flood Mitigation Plan

Tehama County Flood Control & Water Conservation District
Public Meeting Presentation – Lassen View School



August 29, 2006



Goals and Objectives

• Goal 1: Prevent Future Flood Hazard Related Losses of Life and Property

- Objective 1.1 – Minimize or eliminate losses to repetitive-loss properties.
- Objective 1.2 – Prevent future development or buildings within or outside a SFHA from incurring flood hazard related losses.
- Objective 1.3 – Prevent future development or buildings from causing flood hazard related losses to other properties.
- Objective 1.4 – Enhance interagency coordination.

Goals and Objectives (Continued)

• Goal 2: Increase Public Awareness to Flood Hazard Related Risks

- Objective 2.1 – Establish and implement a flood hazard outreach program.

• Goal 3: Improve Emergency Services and Response Capability

- Objective 3.1 – Develop early warning and flood alert system.

• Goal 4: Participate in FEMA's Community Rating System Program

- Objective 4.1 – Monitor mitigation plan implementation and pursue participation in FEMA's CRS Program

Summary of Findings

- Flood Damage Occurs Beyond the FEMA 100-year Special Flood Hazard Areas
- Not all Flood Damage is Documented
- Floodplain Administrators/Managers Lack Critical Data and Information
- "No Adverse Impact" policies are essential for Floodplain Management

Action Items

- Action No. 1: Formulate Design Criteria and Standards to Handle Storm Runoff Quantity and Quality
- Action No. 2: Prepare Topographic Mapping of Central Tehama County
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Action Items (Continued)

- Action No. 5: Formulate and Implement an "Elevation" Project to Identify Homes and Structures that Should be Elevated and Homeowners that Would be Interested in Participating in the Project.
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**PUBLIC MEETING
VETERANS HALL, CORNING
ATTENDANCE RECORD**

**TEHAMA COUNTY
FLOOD MITIGATION PLAN
AUGUST 31, 2006**

NAME	ORGANIZATION	ADDRESS
William Payer 22733 County Ord. 608		Street: 22733 Chase Ave City/State/ZIP: 96021 Tel: 530-824-2455 Fax: E-Mail:
Tom McCubbin TCRCO	TCRCO	Street: City/State/ZIP: 96021 Tel: Fax: E-Mail:
John Brewer	City of Corning	Street: 794 Third St. City/State/ZIP: Corning, CA Tel: 530-824-7036 Fax: 824-2489 E-Mail: jbrewer@corning.org
Ernest White Mary	TERED	Street: 21592 Bealman City/State/ZIP: Corning, CA 96021 Tel: 824-3177 Fax: E-Mail: ERNEWHITE@AOL.COM
RICHARD HANSEN	TCRCO	Street: 3325 Houghton City/State/ZIP: 96021 CORNING Tel: 824-2331 Fax: E-Mail:
LeRoy Anderson Susan Anderson	citizens	Street: 3738 Illinois Ave City/State/ZIP: Corning CA 96021 Tel: 824-0816 Fax: E-Mail:
		Street: City/State/ZIP: Tel: Fax: E-Mail:
		Street: City/State/ZIP: Tel: Fax: E-Mail:



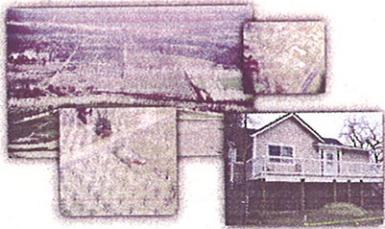
**PUBLIC MEETING
VETERANS HALL, CORNING
ATTENDANCE RECORD**

**TEHAMA COUNTY
FLOOD MITIGATION PLAN
AUGUST 31, 2006**

NAME	ORGANIZATION	ADDRESS
		Street: _____ City/State/ZIP: _____ Tel: _____ Fax: _____ E-Mail: _____
		Street: _____ City/State/ZIP: _____ Tel: _____ Fax: _____ E-Mail: _____
		Street: _____ City/State/ZIP: _____ Tel: _____ Fax: _____ E-Mail: _____
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Tehama County Flood Mitigation Plan

Tehama County Flood Control & Water Conservation District
Public Meeting Presentation – Veterans Hall, Corning, CA



August 31, 2006



Goals and Objectives

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**ACT 8510, TEHAMA COUNTY FLOOD CONTROL
& WATER CONSERVATION DISTRICT**

located within the district, of the percentage of costs to be split among the zones created, and that no general law contains provisions for the issuance of bonds and for the purpose of raising funds to assist in such work. The cost of adequate flood control and water conservation is beyond the means of the property owners and taxpayers of the district, and it is necessary to negotiate to obtain financial aid from the United States Government. It is recommended by the United States Government and it is desirable to immediately form a political entity to satisfactorily deal with the agency of the United States Government.

Investigation having shown conditions in the County of Sonoma to be peculiar to that county, it is hereby declared that a general law cannot be made applicable thereto and that the enactment of this special law is necessary for the conservation, development, control and use of said waters for the protection of life and property therein and for the public good. [Amended by Stats 1951 ch 1344 § 28 p 3244; Stats 1957 ch 1515 § 6 p 2863.]

ACT 8510

Tehama County Flood Control and Water Conservation District Act

[Stats 1957 ch 1280 p 2581, effective July 4, 1957; Amended by Stats 1959 ch 940 p 2968; Stats 1961 ch 631 p 1802, ch 1493 p 3338, ch 2213 p 4559; Stats 1963 ch 332 p 1116; Stats 1967 ch 219 p 1351; Stats 1969 ch 27; Stats 1970 ch 190, effective June 9, 1970.]

AN ACT to create a flood control district to be called Tehama County Flood Control and Water Conservation District; to provide for the control and conservation of flood and storm waters and the protection of watercourses, watersheds, public highways, life and property from damage or destruction from such waters; to provide for the acquisition, retention, and reclaiming of drainage, storm, flood, and other waters and to save, conserve, and distribute such waters for beneficial use in said district; to authorize the incurring of indebtedness, the issuance and sale of bonds, and the levying and collection of taxes and assessments on property within said district and in the respective zones thereof; to define the powers of said district; to provide for the government, management, and operation of said district and for the acquisition and construction of property and works to carry out the purposes of the district, declaring the urgency thereof, to take effect immediately.

Note—Stats 1961 ch 1292, effective July 10, 1961, authorized a grant to the Tehama County Flood Control and Water Conservation District for fish and wildlife enhancement and recreation in connection with the Paskenta Dam and Reservoir.

- § 1. District created: Territory
- § 2. Definitions
- § 3. Objects and purposes of act: Powers of district

- § 3.1 Power to co-operate and contract with United States or this State: Incurrence of indebtedness: When consent of voters necessary: Election procedure
- § 3.2. Additional powers
- § 4. Establishment of zones: Amending boundaries: Proceedings: Prohibitions
- § 4.1. Abolishment of zone: Resolution and contents: Notice and hearing: Recording and filing
- § 4.2. Countywide zone for flood control and bank protection projects or for channel clearance: Notice of intention to create: Posting: Mailing: Hearing: Resolution: Filing
- § 4.3. Abolition of countywide zone
- § 5. Institution of projects for single zones or joint projects for two or more zones: Adoption of resolution: Hearing: Publication of notice: Decision of board
- § 6. Same: Appointment of advisory committee for each zone: Members: Qualification: Right to attend board meetings: Terms: Vacancies
- § 6.1. Same: Appointment of members of first advisory committee: Existing operating advisory committees
- § 7. Dissolution of district: Procedure
- § 8. Board of directors: Members: Qualifications: Terms: Vacancies: Compensation: Election of chairman: Quorum: Powers and duties
- § 9. Interest by directors in contracts awarded by board prohibited: Exceptions: Punishment on violation
- § 10. Performance of duties by county officers
- § 11. Adoption, certification, recording and publication of ordinances, resolutions and other legislative acts: Initiative and referendum powers of electors
- § 12. Claims against district: Preparation, presentment, auditing and allowance or disallowance: Manner
- § 13. Title to property: Authority of board
- § 14. Grant of right of way for location, etc., of flood control works across public lands of State: Procedure when power exercised
- § 15. Contracts exceeding \$2,000: Letting to lowest bidder: Call for bids: Bonds: Rejection of bids: Doing work by force account: Purchase of materials and supplies: Limitations: Application of section
- § 16. Limitations on indebtedness or liability to be incurred
- § 17. General tax levy for district: Manner and time: Amount: Limitations: Increase of tax levied
- § 18. Power of board to cause taxes to be levied within any zone: Purposes
- § 19. Estimation and determination of amount of money necessary for projects: Procedure: Division of district into zones
- § 19.5. Areas exempt from inclusion in zones except upon written application to be included
- § 20. Election in connection with zone projects
- § 21. Period during which another election prohibited where proposition fails to receive required number of votes
- § 22. Contract by municipal corporation or political subdivision within district to pay to district amount assessed against zones within municipality or political subdivision: Effect: Optional procedure
- § 23. Form of bonds: Maturity: Times and place of payment: General obligation bonds: Prohibitions and limitations
- § 24. Same: Denominations: Payment: Signatures and countersignatures: Interest coupons: Signatures by officers ceasing to be such

- § 25. Action to determine validity of bonds: Procedure
- § 26. Issuance and sale of bonds: Manner: Price: Publication of notice of sale: Rejection of bids: Registration: Payment to registered owner
- § 27. Investments of surplus money in sinking fund authorized: Sale of securities: Cancellation of district bonds purchased
- § 28. Bonds as evidence of regularity, etc., of proceedings: Effect of irregularity, etc., in proceedings: Payment of bonds by revenue derived from taxation
- § 29. Bonds as legal investments
- § 30. Proceeds of bonds: Deposit and payments: Uses authorized
- § 31. Annual tax levy for bond interest and principal: Amount: Levy and collection: Procedure: Laws applicable: Basis for taxes: Liens: Compensation to county: Disposition of amount collected
- § 31.5. Levy of tax on zone: Expenditure of revenues: Tax as additional
- § 32. Power of board to levy taxes and to control and order expenditures of revenue derived: Tax rate in accordance with resolution: Special election: Apportionment in accordance with zones
- § 33. Exemption of bonds from taxation
- § 34. Provisions relative to performance of official duties, etc. to be deemed directory: Effect of error in computation of amount due on bonds, coupons, assessments, etc.
- § 35. Construction of act: Effect of errors, irregularities, etc.
- § 36. Separability provision
- § 37. Emergency clause
- § 38. District as validly created: Necessity that statement and map or plat required by Gov C Tit 5 Div 2 Pt 1 be filed before creation of zones effective: Manner of levying taxes: Assessments as liens: Presumption that assessments are correct assessments: Equalizing assessments: Changing assessments: Prescription by board of necessary ordinances: Application of Gov C Tit 5 Div 2 Pt 1 Ch 8
- § 39. Designation of act

§ 1. District created: Territory

A flood control and water conservation district is hereby created, to be known and designated as "Tehama County Flood Control and Water Conservation District," and the boundary and territory of said district are as follows: all that territory of the County of Tehama lying within the exterior boundaries thereof.

§ 2. Definitions

"District" means Tehama County Flood Control and Water Conservation District.

"Board" means the board of directors of the district.

"County" means the County of Tehama.

"Counties" means the several counties of the State of California.

"State" means the State of California.

"Subterranean supply of waters" means (a) that amount of water percolated into natural underground reservoirs, from surface reservoirs owned or controlled by the district, to replenish and augment the supply therein, (b) that

amount of the underflow water of a surface watercourse to the extent augmented by the release of water from a surface reservoir owned or controlled by the district, and (c) any underflow of a surface watercourse being put to beneficial use within the district on the effective date of this act.

§ 3. Objects and purposes of act: Powers of district

The objects and purposes of this act are to provide, to the extent that the board may deem expedient or economical, for the control and disposition of the storm and flood waters of said district and to that end the district is hereby created to be a body corporate and politic and as such shall have power:

- (a) To have perpetual succession.
- (b) To sue and be sued in the name of the district in all actions and proceedings in all courts and tribunals of competent jurisdiction.
- (c) To adopt a seal and alter it at pleasure.
- (d) To take by grant, purchase, gift, devise or lease; to hold, use, enjoy, sell, and contract to sell, lease, or dispose of real, personal and mixed property of every kind within or without the district necessary, expedient or advantageous to the full exercise and economic enjoyment of its purposes.
- (e) To acquire and contract to acquire by purchase, donation or other lawful means in the name of the district from private persons, public and private corporations, associations, agencies or districts, lands, rights-of-way, easements, privileges, material, and property of every kind within or without the district, to do all work and to acquire, construct, maintain and operate any and all works and improvements within or without the district, and to make, execute, carry out and enforce all contracts of every character, necessary, convenient, incidental, useful or proper to carry out any of the provisions, objects or purposes of this act, and to complete, extend, add to, repair, or otherwise improve any works or improvements acquired by it as herein authorized.
- (f) To have and exercise the right of eminent domain, and in the manner provided by law for the condemnation of private property for public use by the State, any political subdivision or district thereof, except that such right shall be exercised only as against property located within the county.

In condemnation proceedings, the district shall proceed under the provisions of Title 7 (commencing at Section 1237) of Part 3 of the Code of Civil Procedure, which said provisions are hereby made applicable for that purpose; and it is hereby declared that the use of the property, lands, rights-of-way, easements or materials which may be condemned, taken or appropriated under the provisions of this act is a public use, and the board is granted the same powers and rights with respect to the taking of property for public uses of said district as are now or may hereafter be conferred by general law on the legislative body of a county, city and county, incorporated city or town, municipal water district or irrigation or reclamation district; provided, however, that no

property shall be taken unless it is taken upon a finding of a court of competent jurisdiction that the taking is for a more necessary public use than that to which it has already been appropriated.

- (g) To compel by injunction or other lawful means the owner or owners of any bridge, trestle, wire line, viaduct, embankment or other structure which shall be intersected, traversed, or crossed by any channel, ditch, bed of any stream, waterway, conduit or canal so to construct or alter the same as to offer a minimum of obstruction to the free flow of water through or along such channel, ditch, bed of any stream, waterway, conduit or canal, and whenever necessary in the case of existing works or structures, to compel the removal or alteration thereof for such purpose or purposes. All costs of relocating or altering or otherwise changing existing works or structures shall be paid by the district: provided, however, that all costs of relocating or otherwise changing any portion of a state highway shall be paid for from funds available for rights-of-way for flood control purposes and not from funds appropriated for state highway purposes.
- (h) To construct, maintain, repair and operate all levees, bulkheads, walls of rock or other material, pumps, dams, channels, conduits, pipes, ditches, canals, reservoirs, drains, tunnels, poles, posts, wires, lamps, powerplants, railroads, dredgers and all other auxiliary, incidental, necessary or convenient agencies, work or improvements that may be required to carry out, facilitate, repair, maintain and complete the same.
- (i) To incur indebtedness, and to issue bonds in the manner herein provided and to provide for the issuance of warrants of the district in payment of district obligations and the registration of any warrants not paid for want of funds and the rate of interest such warrants shall bear after registration and until such payment.
- (j) To cause assessments to be levied and collected for the purpose of paying any obligations of the district in the manner hereinafter provided.
- (k) To appoint and employ such engineers, attorneys, assistants and other employees as may be necessary and fix their compensation, including, if it deem advisable, a clerk, superintendent of work, assessor, treasurer and tax collector, and define their powers and duties, and fix and determine the amount of bond required of each employee and pay the premium on each such bond; which said officers and employees and each of them shall serve at the pleasure of the board.

The board shall have the power to combine any two or more offices in its discretion.

- (l) To establish and fix the boundaries of zones, or abolish the same, in the district as provided in this act; to make transfers of money from the general fund of the district to any special fund and to create and administer such special funds as in their discretion may seem advisable, and to abolish the same; to create and administer revolving funds to facilitate and assist in the carrying on and completing of such acquisi-

tions, works, and improvements provided for herein, and to abolish same; and to do any and all things necessary or incidental to the accomplishment of the things which are permitted to be done under this act.

- (m) To make and enter into contracts with the United States, the State of California, any political subdivision, county, municipality, district, agency or mandatory of the State of California or of the United States and any department, board, bureau or commission of the State of California or the United States, or any person, firm, association or corporation, jointly or severally, for the acquisition of property rights or the construction, maintenance and operation in whole or in part of any or all works and improvements provided in this act.
- (n) To lease or rent to or from any of the parties named in subdivision (m) of this section any property or rights necessary, in the opinion of the board, to accomplish or carry out any of the work or improvement or the maintenance thereof and under such terms and conditions as may be agreed upon between the parties.
- (o) To receive and accept any and all contributions in labor, material or money from any of the parties named in subdivision (m) of this section, to be applied to the work or improvement herein provided for.
- (p) To construct, purchase, lease or otherwise acquire works, and to purchase, lease, appropriate, or otherwise acquire surface water and water rights, useful or necessary to make use of water for any of the purposes authorized by this act.
- (q) To do any and every lawful act necessary to be done that sufficient water may be available for any present or future beneficial use or uses of lands or inhabitants within the district, including but not limited to, the acquisition, storage, and distribution for irrigation, domestic, fire protection, municipal, commercial, industrial, recreational and all other beneficial uses.
- (r) To control flood and storm waters within the district and the flood and storm waters or streams outside the district, which flow into the district; to conserve such waters by storage in surface reservoirs, to divert and transport such waters for beneficial uses within the district; to release such waters from surface reservoirs to replenish and augment the supply of water in natural underground reservoirs and otherwise to reduce the waste of water and to protect life and property from floods within the district; to commence, maintain, intervene in, defend or compromise, in the name of the district, on behalf of the landowners therein, or otherwise to assume the cost and expenses of any action or proceeding involving or affecting the ownership or use of waters or water rights within or without the district, used or useful for any purpose of the district or of the common benefit of any land situated therein, or involving the wasteful use of water therein; to commence, maintain, intervene in, defend and compromise and to assume the cost and expenses of any and all actions or proceedings now or hereafter begun; to prevent interference with or diminution of, or to declare the rights in natural flow of any stream or surface or subterranean supply of waters used or useful for any purpose of the district or of common

benefit to the lands within the district or to its inhabitants; to prevent unlawful exportation of water from said district; to prevent contamination, pollution or otherwise rendering unfit for beneficial use, the surface or subsurface water used or useful in said district, and to commence, maintain and defend actions and proceedings to prevent any such interference with the aforesaid waters as may endanger or damage the inhabitants, lands, or use of water in, or flowing into, the district; provided, however, that said district shall not have power to intervene or take part in, or to pay the costs or expenses of actions or controversies between the owners of lands or water rights which do not affect the interests of the district.

- (s) To co-operate and act in conjunction with the United States or with the State of California, or any of its engineers, officers, boards, commissions, departments or agencies, or with any public or private corporation, or with the County of Tehama, in the construction of any work for the controlling of flood or storm waters of or flowing into said district, or for the protection of life or property therein, or for the purpose of conserving said waters for beneficial use within said district, or in any other works, acts, or purposes provided for herein, and to adopt and carry out any definite plan or system of work for any such purpose.
- (t) To enter upon any land, to make surveys and locate the necessary works of improvement and the lines for channels, conduits, canals, pipelines, roadways and other rights-of-way; to acquire by purchase, lease, contract, gift, devise or other legal means all lands and water and water rights and other property necessary or convenient for the construction, use, supply, maintenance, repair and improvement of said works, including works constructed and being constructed by private owners, lands for reservoirs for storage of necessary water, and all necessary appurtenances, and also where necessary or convenient to said end, and for said purposes and uses, to acquire and to hold the capital stock of any mutual water company or corporation, domestic or foreign, owning water or water rights, canals, waterworks, franchises, concessions, or rights, when the ownership of such stock is necessary to secure a water supply required by the district or any part thereof, upon the condition that when holding such stock, the district shall be entitled to all the rights, powers and privileges, and shall be subject to all the obligations and liabilities conferred or imposed by law upon other holders of such stock in the same company; to enter into and do any acts necessary or proper for the performance of any agreement with the United States, or any state, county, district of any kind, public or private corporation, association, firm or individual, or any number of them, for the joint acquisition, construction, leasing, ownership, disposition, use, management, maintenance, repair or operation of any rights, works or other property of a kind which might be lawfully acquired or owned by said Tehama County Flood Control and Water Conservation District; to acquire by negotiation only the right to store water in any reservoirs, or to carry water through any canal, ditch or conduit not owned or controlled by the district; to grant to any owner or lessee the right to the use of any water owned or controlled by the district or

right to store such water in any reservoir of the district, or to carry such water through any tunnels, canal, ditch, or conduit owned and controlled by the district; to enter into and do any acts necessary or proper for the performance of any agreement with any district of any kind, public or private corporation, association, firm or individual, or any number of them for the transfer or delivery to any such district, corporation, association, firm or individual or any water right or water pumped, stored, appropriated or otherwise acquired or secured, for the use of the Tehama County Flood Control and Water Conservation District, or for the purpose of exchanging the same for other water, water right or water supply in exchange for water, water right or water supply to be delivered to said district by the other party to said agreement.

- (u) To co-operate and contract with the United States under the Federal Reclamation Act of June 17, 1902, and all acts amendatory thereof or supplementary thereto or any other act of Congress heretofore or hereafter enacted permitting co-operation or contract for the purposes of construction of works, whether for irrigation, drainage, or flood control, or for the acquisition, purchase, extension, operation or maintenance of such works, or for a water supply for any purposes, or for the assumption as principal or guarantor of indebtedness to the United States, or for carrying out any of the purposes of the district, and to carry out and perform the terms of any contract so made; and for said purposes the district shall have in addition to the powers specifically set forth in this act, all powers, rights and privileges possessed by irrigation districts as set out in Chapter 2 (commencing at Section 23175) of Part 6 of Division 11 of the Water Code, not inconsistent with the provisions of this act.
- (v) Nothing herein contained shall be deemed to permit the district or its board of directors to acquire or interfere in existing water rights and water uses and facilities for distribution of the same on an involuntary basis, but nothing herein shall be deemed to prohibit negotiating and acquisition of existing rights, uses, and privileges in water by negotiation. [Amended by Stats 1961 ch 631 § 1 p 1802.]

§ 3.1. Power to co-operate and contract with United States or this State: Incurrence of indebtedness: When consent of voters necessary: Election procedure

The power of the district to co-operate and contract with the United States or the State of California pursuant to Section 3 shall include the power to incur an indebtedness or liability under any such contract, but no such contract under which the district incurs an indebtedness or liability exceeding the income or revenue for the year in which the contract is proposed to be executed shall be executed without the consent of two-thirds of the votes cast at a special election to be held for that purpose, such election to be called and held, so far as practicable, in the same manner as bond elections for the district. [Added by Stats 1959 ch 940 § 1 p 2968; Amended by Stats 1963 ch 332 § 1 p 1116.]

§ 3.2. Additional powers

In addition to its other powers, the district has all of the powers granted to public agencies by the Davis-Grunsky Act (Chapter 5 (commencing with Section 12880) Part 6, Division 6, of the Water Code). [Added by Stats 1961 ch 2213 § 1 p 4559: Amended by Stats 1967 ch 219 § 1 p 1351.]

§ 4. Establishment of zones: Amending boundaries: Proceedings: Prohibitions

The board of directors of the district created by this act, by resolutions thereof adopted from time to time, may establish zones within the district without reference to the boundaries of other zones, setting forth in such resolutions, descriptions thereof by metes and bounds and entitling each of such zones by a zone number, and institute zone projects for the specific benefit of such zones. The board may, by resolution, amend the boundaries by annexing property to or by withdrawing property from the zones or may divide existing zones into two or more zones or may superimpose a new or amended zone on zones already in existence, setting forth in such resolutions descriptions of the amended, divided or superimposed zones by metes and bounds and entitling each of such zones by a zone number. The board may not form a zone covering areas of land situated both inside and outside the corporate limits of a municipality.

The board, at any regular or special meeting, may adopt a notice of intention to create a zone (or zones). Said notice shall state the reason for the formation of said zone (or zones), the area to be included in each proposed zone, the date, place and time of the meeting of the board at which it is proposed to pass the resolution to form a zone (or zones). The notices of intention to form a zone (or zones) must be posted in at least five public places in each proposed zone, at least 15 days prior to the proposed formation date. Proof of the posting of said notices shall be filed with the clerk, showing the locations in the proposed zone where said notices were posted, together with the date of posting, and signed by the person who did the posting. The clerk shall mail a copy of said notices of intention to form a zone (or zones) to the county assessor and such other parties as ordered by the board. The notice must also state that any interested person may appear before the board at the time when it is proposed to pass the resolution forming the zone (or zones), and urge the formation or protest the formation thereof. At the time set by the board in its notice of intention to form a zone (or zones), or at any time at which the hearing may be continued, the board shall consider all proposals for or against the formation of the zone (or zones). If it appears to the majority of the board that the formation of a zone (or zones) would be beneficial to the area, they may adopt a resolution forming said zone (or zones), and assign each zone a zone number. The clerk shall file a certified copy of the resolution with the county recorder, and one copy each with the county assessor, the Secretary of State, and the State Board of Equalization.

Proceedings for the establishment of such zones may be conducted concurrently with and as a part of the proceedings for the instituting of projects relating to such zones, which proceedings shall be instituted in the manner prescribed in Section 5 of this act. [Amended by Stats 1961 ch 631 § 2 p 1807.]

§ 4.1. Abolishment of zone: Resolution and contents: Notice and hearing: Recording and filing

When the board finds that a zone within the district no longer serves a useful purpose and is not required for the proper functioning of the district, the board may by resolution abolish the zone, if there is no bonded or contractual indebtedness representing a lien on land in the zone. The board shall give the same notice and hearing in the same manner as was given when the zone was formed.

The resolution abolishing the zone shall contain a metes and bounds description of the zone and a map or plat showing the boundaries of the zone. The resolution abolishing the zone shall be recorded in the office of the recorder of the county. A certified copy of the resolution abolishing the zone shall be filed with the assessor of the county and the State Board of Equalization. [Added by Stats 1961 ch 631 § 3 p 1808.]

§ 4.2. Countywide zone for flood control and bank protection projects or for channel clearance: Notice of intention to create: Posting: Mailing: Hearing: Resolution: Filing

Notwithstanding the provisions of Sections 4 and 19.5 of this act, the board of directors of the district by resolution may establish a countywide zone for the purpose of maintaining flood control projects and bank protection projects, including those constructed by federal agencies, including but not limited to, the United States Army, Corps of Engineers, or pursuant to the Watershed Protection and Flood Prevention Act (Public Law 566, Chapter 656, 83d Congress, Second Session), and for channel clearance when, in the judgment of the board, the channels of any stream are in such condition as to impede the flow of flood water.

The board, at any regular or special meeting, may adopt a notice of intention to create a countywide zone. The notice shall state the reason for the formation of the countywide zone, that the zone shall embrace all that territory of the County of Tehama lying within the exterior boundaries of the county, and the date, place and time of the meeting of the board at which it is proposed to pass the resolution to form a countywide zone. The notices of intention to form a countywide zone must be posted in at least five public places in the county, at least 15 days prior to the proposed formation date. Proof of the posting of the notices shall be filed with the clerk, showing the locations in the county where the notices were posted, together with the date of posting, and signed by the person who did the posting. The clerk shall mail a copy of the notices of intention to form a countywide zone to the county assessor and such other parties as ordered by the board. The notice must also state that any interested person may appear before the board at the time when it is proposed to pass the resolution forming the countywide zone, and urge the formation or protest the formation thereof. At the time set by the board in its notice of intention to form a countywide zone, or at any time at which the hearing may be continued, the board shall consider all proposals for or against the formation of the countywide zone.

If it appears to the majority of the board that the formation of a countywide zone would be beneficial to all the territory within the district, they may

adopt a resolution forming the countywide zone. The clerk shall file a certified copy of the resolution with the county recorder, and one copy each with the county assessor, the Secretary of State, and the State Board of Equalization. [Added by Stats 1963 ch 332 § 2 p 1117.]

§ 4.3. Abolition of countywide zone

A countywide zone may be abolished pursuant to the provisions of Section 4.1, except that the resolution abolishing the countywide zone need not contain a metes and bounds description of such zone nor a map or plat showing the boundaries of such zone. [Added by Stats 1963 ch 332 § 3 p 1117.]

§ 5. Institution of projects for single zones or joint projects for two or more zones: Adoption of resolution: Hearing: Publication of notice: Decision of board

The board may institute projects for single zones and joint projects for two or more zones, for the financing, constructing, maintaining, operating, extending, repairing or otherwise improving any work or improvement for the common benefit of such zone or participating zones. For the purpose of acquiring authority to proceed with any project, the board shall adopt a resolution specifying its intention to undertake such project, together with the engineering estimate or the cost of same to be borne by the particular zones or participating zones and fixing a time and place for public hearing of the resolution and which shall refer to a map showing the general location and general construction of the project.

Notice of such hearing shall be given by publication once a week for two consecutive weeks prior to the hearing. The last publication of the notice shall be a least seven days before the hearing in a newspaper of general circulation designated by the board, circulated in such zone or each of the participating zones, if there be such a newspaper. If there is no such newspaper, then by posting notice for two consecutive weeks prior to the hearing in five public places designated by the board, in such zone or in each of the participating zones. The notice must designate a public place in such zone or in each of the participating zones where a copy or copies of the map or maps of the joint project may be seen by any interested person; such map must be posted in each of the public places so designated in the notice at least two weeks prior to the hearing.

At the time and place fixed for the hearing, or at any time to which the hearing may be continued, the board shall consider all written and oral objections to the proposed project. Upon the conclusion of the hearing the board may abandon the proposed project or proceed with the same, unless prior to 30 days after the conclusion of the hearing written protests against the proposed project, signed by either a majority in number of the registered voters or freeholders residing within such zone or participating zones, are filed with the board. In that event, further proceedings relating to such project must be suspended for not less than six months following the date of the conclusion of the hearing, or the proceeding may be abandoned in the discretion of the board.

§ 6. Same: Appointment of advisory committee for each zone: Members: Qualification: Right to attend board meetings: Terms: Vacancies

Within 90 days after a zone has been established the board shall appoint, for each zone, an advisory committee of three persons who own real property within the zone for which they are appointed and whose names appear on the last Great Register of Tehama County, to represent before the board the residents and property owners of that zone. Each person so appointed shall be entitled to participate and be heard at every meeting of the board in which any matter affecting his zone is discussed or considered. The board shall not discuss or consider any matter which affects any zone unless each member of the advisory committee for that zone has been notified in writing as to the time and place of meeting at least five days before the meeting. The board shall take no affirmative action on any matter pertaining to a zone, unless and until said action is approved by a two-thirds majority of the advisory committee in writing and such written consent is filed with the board. After being notified as required by this section, should any member or members of the advisory committee fail to file a written consent, the said failure of said member or members to act shall be deemed as an approval of the act being considered by the board. The members of the first advisory committee appointed for a zone shall be appointed by the board for the following terms: one member for one year, one member for two years and one member for three years. Thereafter each member shall be appointed for a term of three years, and shall hold office until their successors are appointed and qualified. Vacancies on the advisory committee shall be filled by the board for the unexpired term. Nothing in this act shall be construed to require the appointment of a zone committee for a countywide zone. [Amended by Stats 1961 ch 631 § 4 p 1808; Stats 1970 ch 190 § 1, effective June 9, 1970.]

§ 6.1. Same: Appointment of members of first advisory committee: Existing operating advisory committees

On the effective date of this section, or as soon thereafter as practicable, the board shall reappoint the members of any advisory committee, existing prior to the effective date of this section, for the terms specified in Section 6 of this act for the first advisory committee. Thereafter, the appointment of members of all advisory committees shall be governed by Section 6 of this act.

Any operating advisory committees existing on the effective date of this section are continued in existence, with the existing committee members, as advisory committees under Section 6 of this act. [Added by Stats 1961 ch 631 § 5 p 1808.]

§ 7. Dissolution of district: Procedure

Upon the petition of 200 qualified electors of the district, the district may be dissolved in the manner provided for the dissolution of districts by Article 10 (commencing at Section 58300) of Chapter 1 of Title 6 of the Government Code, except for the number of petitioners required, and the district shall be considered a district within the meaning of all the provisions of such article.

8. Board of directors: Members: Qualifications: Terms: Vacancies: Compensation: Election of chairman: Quorum: Powers and duties

The Board of Supervisors of the County of Tehama shall act as the ex officio Board of Directors of the Tehama County Flood Control and Water Conservation District and shall exercise all the powers enumerated in this act except as otherwise provided and shall perform all other acts necessary or proper in their discretion to accomplish the purpose of this act.

The board of directors may adopt and enforce reasonable rules and regulations for the administration and government of the district and facilitate the exercise of its powers and duties herein set forth, and may employ and fix the compensation of all necessary agents and employees to look after the performance of any work or improvements provided in this act. Each member of the board of directors shall receive twenty-five dollars (\$25) for each day he is in attendance at official meetings of the board and shall be allowed his actual, necessary, and reasonable expenses incurred in carrying out his duties under this act. The chairman of the board of supervisors shall be the chairman of the board of directors, who shall preside at all meetings of the board and in case of his absence or inability to act, the members present shall, by an order entered in their minutes, select one of their number to act as chairman temporarily. Any member of the board may administer oaths when necessary in the performance of his official duties. A majority of the members of the board shall constitute a quorum for the transaction of business, and no act of the board shall be valid or binding unless a majority of the board concur therein. [Amended by Stats 1969 ch 27 § 1; Stats 1970 ch 190 § 2, effective June 9, 1970.]

§ 9. Interest by directors in contracts awarded by board prohibited: Exceptions: Punishment on violation

No director of the district shall in any manner be interested directly or indirectly, in any contract awarded or to be awarded by the board, or in the profits to be derived therefrom. For any violation of this provision, such person shall be guilty of a misdemeanor, and upon conviction thereof shall forfeit his office. This section shall not be construed to apply to any contract made with a corporation for its general benefit where such a director is a minority stockholder therein.

§ 10. Performance of duties by county officers

The board of directors may appoint the county clerk, county assessor and tax collector, county auditor, county treasurer, district attorney, their assistants, deputies, clerks and employees to be ex officio officers, assistants, deputies, clerks and employees respectively of the district. Upon appointment, the board of directors by board order shall determine the amount of compensation paid each officer for the ex officio duties required under this act. [Amended by Stats 1970 ch 190 § 3, effective June 9, 1970.]

§ 11. Adoption, certification, recording and publication of ordinances, resolutions and other legislative acts: Initiative and referendum powers of electors

All ordinances, resolutions and other legislative acts for the district shall be adopted by the board, and certified to, recorded and published in the same

manner, except as herein otherwise expressly provided, as are ordinances, resolutions or other legislative acts for the county.

The initiative and referendum powers are hereby granted to the electors of the district to be exercised in relation to the enactment or rejection of district ordinances in accordance with the procedure established by the laws of the State of California for the exercise of such powers in relation to counties.

§ 12. Claims against district: Preparation, presentment, auditing and allowance or disallowance: Manner

Claims against the district shall be prepared, presented, audited and allowed or disallowed in the same manner and within the periods of time specified in the laws of the State of California, now or hereafter enacted, for the preparing, presenting, auditing, and allowance or disallowance of claims against the county.

§ 13. Title to property: Authority of board

The legal title to all property acquired under the provisions of this act shall immediately and by operation of law vest in the district, and shall be held by the district, in trust for, and is hereby dedicated and set apart to, the uses and purposes set forth in this act and all such property is exempt from taxation or assessment by the State, any county, city, or district. The board is authorized to hold, use, acquire, manage, occupy and possess said property, as provided herein if the board determines by resolution duly passed and entered in their minutes, that any district property, real or personal, is no longer necessary to be retained for the uses and purposes of the district, it may thereafter sell or otherwise dispose of said property, or lease the same, in the manner provided by law for the disposition and sale of property of counties, except that the title to real property, water rights or waterworks shall not be conveyed or alienated except by a vote of the electors at an election held for that purpose.

§ 14. Grant of right of way for location, etc., of flood control works across public lands of State: Procedure when power exercised

There is granted to the district the right of way for the location, construction and maintenance of flood control channels, ditches, waterways, conduits, canals, storm dikes, embankments, and protective works in, over and across public lands of the State of California, not otherwise disposed of or in use, not in any case exceeding in length or width that which is necessary for the construction of such works and adjuncts or for the protection thereof. Whenever any selection of a right of way for such works or adjuncts thereto is made by the district the board must transmit to the State Lands Commission, the Controller of the State and the recorder of the county in which the selected lands are situated, a plat of the lands so selected, giving the extent thereof and the uses for which the same is claimed or desired, duly verified to be correct. If the State Lands Commission shall approve the selections so made it shall endorse its approval upon the plat and issue to the district a permit to use such right of way and lands.

§ 15. Contracts exceeding \$2,000: Letting to lowest bidder: Call for bids: Bonds: Rejection of bids: Doing work by force account: Purchase of materials and supplies: Limitations: Application of section

All contracts for the construction of any unit of work, except as hereinafter provided, estimated to cost in excess of three thousand five hundred dollars (\$3,500) shall be let to the lowest responsible bidder in the manner hereinafter provided. The board shall advertise by three insertions in a daily newspaper of general circulation or two insertions in a weekly newspaper of general circulation published in the district inviting sealed proposals for the construction of the work before any contract shall be made therefor, and may let by contract separately any part of said work. The board shall require the successful bidder to file with the board good and sufficient bonds to be approved by the board conditioned upon the faithful performance of the contract and upon the payment of all claims for labor and material in connection therewith, such bonds to contain the terms and conditions set forth in Chapter 3 (commencing at Section 4200) of Division 5 of Title 1 of the Government Code, and to be subject to the provisions of that chapter. The board shall also have the right to reject any and all bids, in which case the board may advertise for new bids. In the event no proposals are received pursuant to advertisement therefor, where the estimated cost of such work does not exceed the sum of five thousand dollars (\$5,000) or where the work consists of emergency work necessary in order to protect life and property, the board of directors, by unanimous vote of all members present, may without advertising for bids therefor have said work done by force account. The district shall have the power to purchase in the open market without advertisement for bids therefor, materials and supplies for use in any work therewith either under contract or by force account; provided, however, that material and supplies for use in any new construction work or improvement, except work referred to in the preceding sentence, may not be purchased if the cost thereof exceeds five thousand dollars (\$5,000), without advertising for bids and awarding the contract therefor to the lowest responsible bidder.

The provisions of this section shall have no application to a contract entered into with the United States under the authority of Section 3 of this act, or to a contract authorized by a vote of the electorate of the district. [Amended by Stats 1970 ch 190 § 4, effective June 9, 1970.]

§ 16. Limitations on indebtedness or liability to be incurred

The district shall not incur any indebtedness or liability in any manner or for any purposes exceeding in any year the income and revenue provided for such year, and any indebtedness or liability incurred in violation of this section shall be absolutely void and unenforceable.

This section shall have no application to debts or liabilities incurred pursuant to the provisions of this act, authorizing the issuance of bonds, the levying of special assessments, the execution of contracts with the United States nor to the incurring of any indebtedness or liability authorized by a vote of the electors of the district at an election held for such purpose.

§ 17. General tax levy for district: Manner and time: Amount: Limitations: Increase of tax levied

The board in any year shall have the power to levy a tax, which shall be in addition to taxes for the payment of and interest on any bonded indebtedness, or any other indebtedness to the United States, upon the taxable property in said district. Said tax shall be levied and collected at the same time and in the same manner, together with county taxes and not to exceed, however, the sum of seven cents (\$0.07) on each one hundred dollars (\$100) of the assessed valuation of all property within the district, measured by the county assessment roll last equalized prior to the levying of said tax, to pay the costs and expenses of surveys, of zoning, compensation for clerical, engineering, legal, printing and advertising of all resolutions, notices, and other matter required to be printed, posted or published, all costs and expenses of legal actions or proceedings, and also the rental or purchase of real or personal property used in connection with such work and surveys, or any other of its purposes and to repay the county any and all moneys loaned to the district for the purposes herein stated and prior to the receipt of taxes.

The board may condition any increase in the tax levied pursuant to this section above the sum of three cents (\$0.03) on each one hundred dollars (\$100) of the assessed valuation of all property within the district upon the approval of a majority of the registered voters within the district voting at an election called for that purpose and held within the district.

The tax levied pursuant to this section shall be known as the general tax levy for the district. [Amended by Stats 1961 ch 631 § 6 p 1809; Stats 1970 ch 190 § 5, effective June 9, 1970.]

§ 18. Power of board to cause taxes to be levied within any zone: Purposes

The board shall have the power, as provided for in this act, to cause taxes to be levied within any zone for the purpose of paying any obligation of the district created for the district and to accomplish the purpose of the district and of this act.

§ 19. Estimation and determination of amount of money necessary for projects: Procedure: Division of district into zones

The board may estimate and determine the amount of money necessary to be raised to construct or purchase necessary works and acquire the necessary property and rights therefor and otherwise carry out the provisions of this act.

For the purpose of ascertaining the amount of money necessary to be raised for such purposes, or any of them, the board may cause such surveys, examinations, drawings and plans to be made as shall furnish the proper basis for said estimate.

In the estimate of the amount necessary to be raised, the board may include a sum sufficient to pay the interest on the bonds to be issued for a period of three years or less. All such surveys, examinations, drawings, and plans shall be made under the direction of the engineer of the district and shall be certified by him. After receiving such report the board may determine and

declare by resolution whether or not the proposed plan of work is satisfactory and whether or not the project, as set forth in the report, is feasible, and if so, may make an order determining the amount of bonds that should be issued in order to raise the amount of money necessary therefor, and in determining the amount, sufficient shall be included to cover the cost of inspection of works in course of construction.

Prior to the calling of the bond election hereinafter referred to, the board shall cause the entire district, or any portion thereof, to be divided into a zone or zones, if in its opinion such division is necessary because of the varying benefits to the property within the district, together with a statement as to the amount of the sum to be raised from each of such zone or zones for the payment of principal and interest of the bonds of the zone or zones. The district may be divided into as many zones as may be deemed necessary and each zone shall be composed of and include any of the lands in the district which in the opinion of the board will be benefited in substantially the same manner. Each zone shall be designated on a map or plat of the district filed in the office of the board and shall show the separate boundaries of each zone and a statement of the amount to be raised from each zone.

§ 19.5. Areas exempt from inclusion in zones except upon written application to be included

The following areas are exempted from inclusion in any zone within the district except upon written application to be included in all or part of any proposed zone:

- (a) Existing irrigation districts.
- (b) The operating areas of any existing mutual water companies.

§ 20. Election in connection with zone projects

If after the hearing provided for in Section 5 of this act, the board determines to proceed with any project, the board shall call a special election and submit to the qualified voters of said zone or zones, the following propositions:

1. Shall the report adopted by the board be ratified?
2. Shall the district incur a bonded indebtedness for the purpose of providing for the control and disposition of flood and storm waters of the zone and to protect from damage from such storm and flood waters, the waterways, property, public highways, and public places in the district, and for any other purpose set forth in Section 3 hereof?
3. If a contract with the United States or the State of California is required to be submitted to the voters pursuant to Section 3.1 hereof, shall the district execute such contract?

The resolution calling the special election shall state the estimated cost of the proposed work and improvements, the amount of the principal of the indebtedness to be incurred therefor and shall fix the maximum rate of interest to be paid on said indebtedness which shall not exceed 5 percent per annum, and shall fix the date on which the special election shall be held and the manner of voting for and against the ratification of the report adopted by the board, and for and against the incurring of such indebtedness.

If a contract with the United States or the State of California is submitted for approval of the voters, the resolution shall state the purpose of the contract and the amount of the indebtedness or liability to be incurred thereunder, and shall fix the manner of voting for and against such contract.

For the purpose of the election, the board shall, in its resolution, establish election precincts within the boundaries of the zones affected, and may form election precincts by consolidating the precincts established for general election purposes in the zones, and shall designate a polling place and appoint one inspector, two judges and two clerks for each of such precincts.

In all particulars not recited in such resolution, the election shall be held as nearly as practicable in conformity with the general election laws of the State.

At such election all persons whose names appear on the last Great Register of Tehama County and who own real property within the zone or zones involved shall be entitled to vote as hereinafter provided. The number of votes shall be governed by the assessed value of all real and personal property owned by the elector within the zone involved. Every landowner shall be entitled to one vote for the first one thousand dollars (\$1,000) of assessed value or fraction thereof and an additional vote for each additional one thousand dollars (\$1,000) of assessed value or fraction thereof.

In the case of land owned by a copartnership or a corporation the method of voting shall be as follows:

Copartners whose names appear on the last Great Register of Tehama County and who own land in the zone or zones affected shall be eligible to vote. In the case of a corporation owning land in the zone or zones affected and who has a stockholder or stockholders whose name or names appear on the last Great Register of Tehama County said stockholder or stockholders shall be eligible electors. A copartnership or corporation may designate which partner or partners and stockholder or stockholders is to represent the owners of land at any election and the percentage to be voted by each copartner or stockholder. The designation is to be made in writing and in the case of a copartnership the document shall be signed by the partners and in the case of a corporation the document shall be signed by the officers and bear the corporate seal and said document shall be delivered to the election board at the time of voting. If the voter is not a resident of the zone or zones affected, his voting precinct shall be the precinct in which his land, or the land he represents, is situated.

Such resolution calling such election shall be published once a day for at least seven days, in some newspaper published at least five days a week in the district, or once a week for two weeks in some newspaper published less than five days a week in such district, and one insertion each week for two succeeding weeks shall be sufficient publication in such newspaper published less than five days a week. No further notice of such election need be given.

Any defect or irregularity in the proceedings prior to the election shall not affect the validity of the bonds or of any contract submitted for approval.

If at such election two-thirds or more of the votes are cast in favor of ratifying the adoption of the report by the board and the incurring of such

bonded indebtedness, then the bonds of the district, for the amounts stated in such proceedings, shall be issued and sold as provided in this act.

If at such election two-thirds or more of the votes are cast in favor of executing a contract submitted for approval, then the contract shall be executed by the district. [Amended by Stats 1959 ch 940 § 2 p 2969.]

§ 21. Period during which another election prohibited where proposition fails to receive required number of votes

Should the proposition be submitted to the electorate as provided in Section 20 fail to receive the requisite number of votes of the qualified electors voting at such election for the purposes specified, the board shall not for one year after such election call or order another election in the district for the same purposes.

§ 22. Contract by municipal corporation or political subdivision within district to pay to district amount assessed against zones within municipality or political subdivision: Effect: Optional procedure:

Notwithstanding any other provision in this act, the governing body of any municipal corporation or political subdivision at any time after the location and extent of zones within the district and the amount to be raised therefrom in each of such zones for the purpose of assessment have been finally fixed and determined by the board as provided in Section 19, but before the calling of the bond election as provided in Section 20 may, with the consent of the board, enter into a contract with the district to pay to the district for the benefit of the bond fund thereof, if a bond issue be authorized and bonds be issued, an amount which shall be equal to the total amount assessed against all zones situated entirely within the corporate limits of the municipality or political subdivision. Thereupon the charges against the zone or zones shall be canceled to the extent of the amount so agreed to be paid, and thereafter the electors residing within the zone or zones shall not be entitled to vote at such bond election. Such contract shall contain such other and additional provisions as the board deems necessary or advisable in order to protect the interests of the district and to substitute the contract in lieu and instead of the assessments within the zone or zones so assumed by the municipality or other political subdivision.

It shall be wholly optional with the board whether or not to proceed as provided in this section.

§ 23. Form of bonds: Maturity: Times and place of payment: General obligation bonds: Prohibitions and limitations

Subject to the provisions of this act, the board shall prescribe by resolution the form of the bonds and of the interest coupons attached thereto and shall fix the rate of interest said bonds shall bear, not to exceed 5 percent per annum. The bonds shall mature serially in amounts to be fixed by the board, payment of the bonds commencing not later than five years from the date thereof and being completed in not more than 50 years from said date. The board shall fix the place or places (which may be within or without the State of California and which shall be designated in the bonds) where the bonds, together with the interest thereon, shall be payable. The district or the board

of directors thereof are not by this act authorized to issue general obligation bonds for the purpose of conserving or distributing water to be used for agricultural irrigation purposes. The principal amount of general obligation bonds issued shall not exceed in the aggregate that amount allowed by the California Districts Securities Commission but in no event to exceed 15 percent of the assessed value of all the real and personal property of the zone or zones involved.

§ 24. Same: Denominations: Payment: Signatures and countersignatures: Interest coupons: Signatures by officers ceasing to be such

The bonds shall be issued in such denominations as the board may determine, except that no bonds shall be of a less denomination than one hundred dollars (\$100) nor of a greater denomination than one thousand dollars (\$1,000). The bonds shall be payable on the day and at the place or places fixed therein, and with interest specified therein, which interest shall be payable semiannually, except the interest for the first year which may be paid in one installment. The bonds shall be signed by the chairman of the board or such other member of the board as the board may, by resolution, designate, and countersigned by the treasurer of the district and the seal of said district shall be affixed thereto. The interest coupons of the bonds shall be numbered consecutively and signed by the treasurer of said district by his engraved or lithographed signature. In case any officer whose signature or countersignature appears on the bonds or coupons shall cease to be such officer before the delivery of such bonds to the purchaser the signature or countersignature shall nevertheless be valid and sufficient for all purposes the same as if such officer had remained in office until the delivery of the bonds.

§ 25. Action to determine validity of bonds: Procedure

An action to determine the validity of bonds may be brought pursuant to Chapter 9 (commencing with Section 860) of Title 10 of Part 2 of the Code of Civil Procedure. [Amended by Stats 1961 ch 1493 § 1 p 3338.]

§ 26. Issuance and sale of bonds: Manner: Price: Publication of notice of sale: Rejection of bids: Registration: Payment to registered owner

The board shall issue and sell the whole or any part of the bonds to the highest bidder or bidders for cash at the best price obtainable therefor, but in no event for less than the par value of such bonds and the accrued interest thereon. Before making a sale of any of the bonds, notice of the sale shall be given by publication in at least one newspaper of general circulation, published in the district by two insertions therein; and no sale shall be had prior to the expiration of 15 days from the first publication of the notice. The board shall have the right to reject any and all bids when in its discretion it appears to the best interest of the district to do so, and may thereafter readvertise as provided in this section for original sale. The bonds may be registered with the treasurer in accordance with the provisions of any law applicable to the registration of municipal bonds, and thereafter the principal and interest thereon shall be paid to the proper registered owner thereof.

§ 27. Investments of surplus money in sinking fund authorized: Sale of securities: Cancellation of district bonds purchased

Whenever the district shall have any moneys in any sinking fund established for the purpose of providing for the payment of the principal or interest of any bonded indebtedness, which money is not immediately required for the purpose of making such payment, the same or any part thereof may be invested temporarily in any bonds already issued by such district or in any bonds of the United States of America or the State of California. Such investment may be made by direct purchase of any issue of bonds of the district or any part thereof at the original sale of such bonds or by the purchase of such bonds after they have been so issued. Any bonds so purchased and held in any such sinking fund may from time to time be sold and the proceeds temporarily reinvested in bonds as above provided. Sales of any bonds so purchased and held in the sinking fund shall, from time to time, be made in season so that the proceeds may apply to the purpose for which the sinking fund was created except that if such moneys shall not be required for the purpose of paying the interest or any part of the principal of the outstanding bonds, the bonds of the district purchased from such moneys may be canceled by the treasurer of said district upon order by the board. After such cancellation such bonds shall cease to be an obligation of the district for any purpose whatsoever.

§ 28. Bonds as evidence of regularity, etc., of proceedings: Effect of irregularity, etc., in proceedings: Payment of bonds by revenue derived from taxation

Bonds issued under this act shall be, by their issuance, conclusive evidence of the regularity, validity and legal sufficiency of all proceedings, acts and determinations had or made under this act. No error, defect, irregularity, informality and no neglect or omission of any officer of the district in any procedure, taken hereunder, which does not affect the jurisdiction of the board to order the doing of the thing or things proposed to be done, shall void or invalidate such proceedings or any bonds issued thereunder. The bonds and the interest thereon shall be paid by revenue derived from an annual tax upon the taxable property within the district, and all the taxable property in the district shall be and remain liable to be assessed for such payments as hereinafter provided.

§ 29. Bonds as legal investments

Any bonds which shall be issued under the provisions of this act shall be legal investments for all trust funds, and for the funds of insurance companies, banks, both commercial and savings, and trust companies, and for state school funds. Whenever any money or funds may be, by any law now or hereafter enacted, invested in bonds of cities, cities and counties, counties, school districts or irrigation districts, within the State of California, such money or funds may be invested in the bonds issued under this act. Whenever bonds of cities, cities and counties, counties, school districts or irrigation districts within this State may be, by any law now or hereafter enacted, used as security for the performance of any act or the deposit of any public moneys, the bonds issued under this act may be so used.

§ 30. Proceeds of bonds: Deposit and payments: Uses authorized

All proceeds received from the sale of the bonds hereunder shall be deposited with the County Treasurer of the County of Tehama, and be paid out by him upon authority of the board and by proper warrant. All proceeds in excess of the actual cost of all work and improvement and proceedings thereunder may be used for any lawful purposes for which the district was created as in this act provided. [Amended by Stats 1959 ch 940 § 3 p 2970.]

§ 31. Annual tax levy for bond interest and principal: Amount: Levy and collection: Procedure: Laws applicable: Basis for taxes: Liens: Compensation to county: Disposition of amount collected

The board shall at the time for fixing the general tax levy for district purposes pursuant to Section 17 and in the manner of such general tax levy provided, levy and collect annually each year until the bonds are paid or until there shall be a sum in the treasury of such district set apart for that purpose to meet all sums coming due for principal and interest on said bonds, a tax sufficient to pay the annual interest on said bonds and also such part of the principal thereof as shall become due before the time for fixing the next general tax levy. There may be included in such tax a sum sufficient, in the judgment of the board to take care of anticipated delinquencies, except that if the maturity of the indebtedness created by the issuance of bonds be made to begin more than one year after the date of the issuance thereof, tax shall be levied and collected annually at the time and in the aforesaid manner, in an amount sufficient to pay the interest on said indebtedness as it falls due and also to constitute a sinking fund for the redemption thereof on or before maturity. The tax herein required to be levied and collected shall be in addition to all other taxes levied for district purposes and shall be collected at the time and in the same manner as other district taxes are collected, and be used for no other purpose than the payment of said bonds and accruing interest.

Such tax shall be levied upon all taxable property within the benefiting zones excluding any property belonging to any county, municipality, or political subdivision within the district, or property belonging to the State of California or the United States.

If the district has been divided into zones and the amount to be raised for the redemption of principal and interest of the bonds from each such zone has been determined as provided in this act, the amount of the tax levied shall be divided according to the amount, and the amount to be raised from the taxable property within each zone shall be levied upon and against the property in such zone as hereinbefore provided.

The provisions of law of this state prescribing the time and manner of levying, assessing, equalizing and collecting county property taxes including the sale of property for delinquency, and for redemption from such sale, and the duties of the several county officers with respect thereto, so far as they are applicable, and not in conflict with the specific provisions of this act, are hereby adopted and made a part hereof. Such officers shall be liable upon their several official bonds for the faithful discharge of the duties imposed upon them by this act.

The board shall take the assessment on the equalized roll of the County of Tehama as the basis for district taxes and for its taxes collected by the county officials of said county. On or before the first of August the board shall file with the auditor a certified copy of the map or plat showing the zones and the amount to be raised from each zone. The auditor of such county must, on or before the second Monday of August of each year, transmit to the board a statement in writing showing the total value of all property within the district, which value shall be ascertained from the equalized roll of such county for that year. Said statement shall also show the total value of all property in each of said zones respectively.

The board shall, on or before the first weekday in September, or if such weekday falls upon a holiday, then upon the first business day thereafter, fix the rate of tax for each zone, and designate the number of cents upon each one hundred dollars (\$100) on the equalized roll, which rate of taxation shall be sufficient to raise the amount previously fixed by the board as hereinabove prescribed. Such acts by the board shall constitute a valid assessment of the property and a valid levy of the tax so fixed. The board must immediately thereafter transmit to the county auditor a statement of the rate of taxes so fixed by said board for each zone into which the district may be divided and the county auditor shall enter such rate upon the county tax roll. Such taxes so levied shall be collected at the same time and in the same manner as county taxes and when collected the net amount ascertained as hereinafter provided shall be paid to the treasurer of the district under the general requirements and penalties provided by law for the settlement of other taxes.

All taxes levied under the provisions of this act shall be a lien upon the property on which they are levied and unless the board has by resolution otherwise provided the enforcement of the collection of such taxes shall be had in the same manner and by the same means as provided by law for the enforcement of the liens for state and county taxes, all provisions of law relating to the enforcement of the latter being hereby made a part of this act. [Amended by Stats 1961 ch 631 § 7 p 1809; Stats 1970 ch 190 § 6, effective June 9, 1970.]

§ 31.5. Levy of tax on zone: Expenditure of revenues: Tax as additional

After the formation of a zone pursuant to the provisions of Section 4, the board shall have power, in any year, to levy a tax upon the taxable property in any such zone as provided in Section 31 at the time and in the manner set forth therein, to carry out any of the obligations specified in this act and to pay any contractual indebtedness incurred for such zone in accordance with the provisions of Section 3.1. The board shall have power to control and order the expenditures for such purposes of all revenue derived. The tax authorized by this section shall be in addition to any tax levied to meet the bonded indebtedness of the district and all interest thereon. [Added by Stats 1963 ch 332 § 4 p 1118.]

§ 32. Power of board to levy taxes and to control and order expenditures of revenue derived: Tax rate in accordance with resolution: Special election: Apportionment in accordance with zones

After the formation of a zone in the district, the board shall have power, in

any year, to levy a tax upon the taxable property in the benefiting county-wide or intracounty zones as provided in Section 31 at the time and in the manner set forth therein, to carry out any of the objects or purposes of this act, and to pay the costs and expenses of maintaining, operating, extending and repairing any work or improvement of such zones for the ensuing fiscal year. The board shall have power to control and order the expenditures for said purposes of all revenue so derived, except that taxes levied under this section for any one year shall not exceed the rates specified in this section on each one hundred dollars (\$100) of the assessed valuation of the property in such zones as said assessed valuation is shown on the last preceding assessment records for state and county purposes.

The board on its own motion may set a tax rate not exceeding five cents (\$0.05) on each one hundred dollars (\$100) of the assessed valuation of such property. Upon the filing with the board of the unanimous written consent of the advisory committee, if there be a committee, the board may by majority vote set a tax rate not exceeding fifteen cents (\$0.15) on each one hundred dollars (\$100) of the assessed valuation of such property. The board may call a special election for the purpose of submitting to the voters of the zone a resolution to authorize the board to set a tax rate not exceeding fifty cents (\$0.50) on each one hundred dollars (\$100) of the assessed valuation of such property during the years specified in the resolution. If a majority of the votes cast at the special election approve the resolution, the board is authorized to set the tax rate in accordance with the resolution.

Such tax shall be in addition to any tax levied to meet the bonded indebtedness of said district and all interest thereon. If the district has been divided into zones, the taxes to be levied as provided in this section shall be apportioned in accordance with the zones established for the levying and collection of taxes to pay the principal and interest of the bonds of the district. [Amended by Stats 1961 ch 631 § 8 p 1811; Stats 1970 ch 190 § 7. effective June 9, 1970.]

§ 33. Exemption of bonds from taxation

Bonds issued by the district and property of the district shall be exempt from taxation as provided by Sections 1 and 1 3/4 of Article XIII of the State Constitution.

§ 34. Provisions relative to performance of official duties, etc., to be deemed directory: Effect of error in computation of amount due on bonds, coupons, assessments, etc.

The provisions of this act relative to the performance of official duty as to any time or place, the form of any resolution, notice, order, list, certificate of sale, deed or other instrument shall be deemed directory. No bond, coupon, assessment, or installment thereof, or of the interest or penalties thereon, or certificate of sale or deed shall be held invalid for error in the computation of the proper amount due on the same; provided, the error be found to be comparatively negligible or be found to be one in favor of the owner of the property affected thereby.

§ 35. Construction of act: Effect of errors, irregularities, etc.

This act shall be liberally construed to the end that the purposes may be effective. No error, irregularity, informality and no neglect or omission of any officer of the district in any procedure taken hereunder which does not directly affect the jurisdiction of the board to order the work done or improvement to be made shall void or invalidate such proceedings or any assessment for the cost of work or improvement done thereunder.

§ 36. Separability provision

If any provision of this act, or the application thereof to any person or circumstance, is held invalid, the remainder of this act, or the application of such provision to other persons or circumstances, shall not be affected thereby.

§ 37. Emergency clause

This act is hereby declared to be an urgency measure necessary for the immediate preservation of the public peace, health or safety within the meaning of Section 1 of Article IV of the Constitution and shall therefore go into immediate effect. A statement of the facts constituting such necessity is as follows:

The effective culmination of planning and application and operation of engineering and fiscal data developed for use in this project requires the development of an immediate and expedient program prior to the flood season. In order to accomplish this purpose and to effect operation at the earliest possible moment under favorable conditions, it is necessary that this act take effect immediately.

§ 38. District as validly created: Necessity that statement and map or plat required by Gov C Tit 5 Div 2 Pt 1 be filed before creation of zones effective: Manner of levying taxes: Assessments as liens: Presumption that assessments are correct assessments: Equalizing assessments: Changing assessments: Prescription by board of necessary ordinances: Application of Gov C Tit 5 Div 2 Pt 1 Ch 8

Notwithstanding Chapter 8 (commencing at Section 54900) of Part 1 of Division 2 of Title 5 of the Government Code, the district is validly created for the purposes of assessment and taxation. The creation of any zone in the district shall not be effective for purposes of assessment or taxation for the fiscal year 1957-58 and shall not be effective for such purposes for any fiscal year thereafter unless the statement and map or plat required by Chapter 8 (commencing at Section 54900) of Part 1 of Division 2 of Title 5 of the Government Code are filed with the county assessor and the State Board of Equalization on or before the first of February of the year in which the assessments or taxes are to be levied. Until such time as the creation of any zone shall be effective for purposes of assessment or taxation, any tax or assessment levied by the board shall be levied at a uniform rate on all property in the district.

For the fiscal year 1957-58, but for no other fiscal year, the assessment and equalization of property for the purpose of district taxation shall be effected as provided in this section.

Assessments of this district for the fiscal year 1957-58 are liens on the property the same as if they were county taxes, except that the district assessment liens attach as of noon on the day after this act becomes effective.

It is presumed that the assessments of property made by the county assessor and by the State Board of Equalization for county taxation purposes for the fiscal year 1957-58 are the correct assessments for purposes of assessment by the district and the rolls prepared by the county assessor and the State Board of Equalization shall be used for purposes of levying and collecting the assessments for the district. If the ownership or taxable situs or value of any property changes between noon on the first Monday in March, 1957, and the date on which attaches the lien for assessments of the district for the fiscal year 1957-58, then, on petition of the taxpayer affected to the assessing authority, suitable entry shall be made on the assessment roll, in the manner prescribed by the State Board of Equalization, to indicate such change in the ownership or taxability or value of the property for purposes of assessment by the district.

In equalizing the assessments made by the county assessor, the Tehama County Board of Equalization, in addition to its regular equalization duties shall also, in the same manner and under the same rules, equalize the valuation of property for purposes of assessment by the district in accordance with the requirements of this section and any such changes made by the county board of equalization in the assessment roll shall be entered in the manner prescribed by the State Board of Equalization.

If, for purposes of assessments by the district, a change in the assessment for county taxation purposes is not sought under this section before the end of the period during which such assessment may be equalized, or corrected on a petition for reassessment, such assessment, if valid for county taxation purposes, is conclusively presumed to be the correct assessment for assessment purposes of the district.

The board may prescribe by ordinance any necessary procedure, in accordance with the policy of this act, for the purpose of assessing, equalizing, levying, and collecting taxes or assessments for the district for the fiscal year 1957-58.

Chapter 8 (commencing with Section 54900) of Part 1 of Division 2 of Title 5 of the Government Code does not apply to the district with respect to any tax or assessment levied by the district for the fiscal year 1957-58. [Amended by Stats 1970 ch 190 § 8, effective June 9, 1970.]

§ 39. Designation of act

This act shall be known as the "Tehama County Flood Control and Water Conservation District Act."

**TEHAMA COUNTY FLOOD CONTROL &
WATER CONSERVATION DISTRICT
RESOLUTION No. 7-1995**

RESOLUTION NO. 7-1995

**A RESOLUTION OF THE TEHAMA COUNTY FLOOD CONTROL AND WATER
CONSERVATION DISTRICT ESTABLISHING POLICY FOR REPAIR OF DAMAGED LEVEE
AND STREAM BANK REPAIR PROJECTS**

WHEREAS, during the first three months of 1995, two separate state and federal flood emergency disasters were declared in January and March (FEMA 1044 and 1046) for Tehama County; and

WHEREAS, after the completion of initial levee and stream bank repair involvement by the Tehama County Flood Control and Water Conservation District ("District"), a report was prepared by District staff to, in part, assess the role to be filled by the District in emergency flood repair operations; and

WHEREAS, the findings developed in the subject report underscored the need for a definitive, written policy relative to District emergency responsibilities and involvement which can be addressed in administrative form in future flood disasters; and

WHEREAS, the findings of the report were reviewed by the Tehama County Flood Control and Water Conservation District Board of Directors Levee Ad Hoc Committee members Rowen and Willard, whose consequent observations were incorporated into a revised report, which was distributed to the County offices of the Sheriff, Planning, Building and Safety, County Counsel, Natural Resources Conservation Service, and California Department of Forestry for their review; and

WHEREAS, the comments of the reviewing authorities and the District Board of Directors were considered in the establishment of the resolution herein which provides guidelines for future District involvement in emergency flood repair operations.

NOW, THEREFORE, BE IT RESOLVED that the Tehama County Flood Control and Water Conservation District shall adhere to the following policy statements relative to repair of flood-damaged levees and streambanks and obstacle-clearing activities in Tehama County:

1. *Routine annual maintenance and operations expenditures of Tehama County Flood Control and Water Conservation District resources should only be committed to permanently repair and maintain those sites mandated by legal agreement with the California State Department of Water Resources, U.S. Army Corps of Engineers, or other applicable parties.*

2. *During periods of flooding, where the local Incident Command System and/or emergency operations procedures have not been activated, and a disaster declaration has not been issued by the State of California or the United States Federal government, the District shall consider repairing only those sites mandated by legal agreement with the California Department of Water Resources, U.S. Army Corps of Engineers, or other applicable parties. The Tehama County Flood Control and Water Conservation District will not provide materials, equipment, or financial commitment to private properties damaged by flood waters. Permanent repairs to private levees and stream courses shall be the responsibility of the private property owner. This policy shall remain in effect until such time that a modified Board - adopted resolution dictates otherwise. A revised resolution would best be proposed to the Board after an applicable non-emergency state or federal funding program becomes available, or at such time that additional local funds are made available for the express purpose of assisting repairs to flood-damaged private property.*

3. *If private levees are damaged by flooding in a time where state and federal emergency disaster status has not been declared, yet the Emergency Operations Procedures / Incident Command System has been instituted locally, District resources may be directed by the Incident Commander to assist in "flood fight" operations only. District involvement in flood fight operations shall employ temporary measures, such as providing materials (sand, sand bags, stakes, etc), technical assistance and incidental equipment to the Incident Command Center, with the understanding that any additional incurred costs will be reimbursed to the District through the agency represented by the Incident Commander.*

4. *During a disaster declared by the State of California and the U.S. Federal Government, the District may, after initiating technical assistance and assessing the situation, participate in the repair of damaged, private levees, only if: a) immediate risk to life and multiple properties exists due to a threatened levee, and b) assurance of federal reimbursement funds is provided by an appropriate agency (most notably --- Natural Resource Conservation Service Emergency Watershed Program), and c) indemnification*

agreement(s) between the affected property owner(s) and the District are executed prior to repair authorization, which transfer maintenance responsibilities from the District to the property owner.

BE IT FURTHER RESOLVED THAT the above resolution shall be distributed to District staff and applicable agencies involved in local flood emergencies, including but not limited to the Office of the Tehama County Sheriff, Tehama County Board of Supervisors and its Administrative Office, Tehama County Counsel, USDA Natural Resource Conservation Service and the California Department of Forestry.

The foregoing Resolution was offered by Director McIver and adopted by the following vote of the Board:

AYES: Directors Marelli, Landingham, Rowen, McIver and Willard

NOES: None

ABSENT OR NOT VOTING: None

STATE OF CALIFORNIA)

) ss

COUNTY OF TEHAMA)

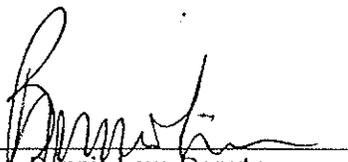
I, MARY ALICE GEORGE, County Clerk and ex-officio Clerk of the Board of Directors of the Tehama County Flood Control and Water Conservation District, State of California, hereby certify the above and foregoing to be a full, true and correct copy of a Resolution made by said Board of Directors on the 22nd day of August, 1995.

DATED: This 22nd day of August, 1995.

MARY ALICE GEORGE

County Clerk and ex-officio Clerk of the Board of Directors of the Tehama County Flood Control and Water Conservation District

By: _____


Bonnie Low, Deputy

**TEHAMA COUNTY FLOODPLAIN
MANAGEMENT REGULATIONS**

Chapter 15.52

FLOODPLAIN MANAGEMENT REGULATIONS

Sections:

ARTICLE 1. TITLE, FINDINGS OF FACT, PURPOSE AND METHODS

- 15.52.110 Title.
- 15.52.120 Findings of Fact.
- 15.52.130 Purpose.
- 15.52.140 Methods of Reducing Flood Losses.

ARTICLE 2. GENERAL PROVISIONS

- 15.52.210 Definitions.
- 15.52.220 Lands to Which this Chapter Applies.
- 15.52.230 Basis For Establishing the Areas of Special Flood Hazard.
- 15.52.240 Violations.
- 15.52.250 Abrogation and Greater Restrictions.
- 15.52.260 Interpretation.
- 15.52.270 Warning and Disclaimer of Liability.
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ARTICLE 3. ADMINISTRATION

- 15.52.310 Establishment of Development Permit.
- 15.52.320 Designation of the Floodplain Administrator.
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ARTICLE 4. PROVISIONS FOR FLOOD HAZARD REDUCTION

- 15.52.410 Standards of Construction.
- 15.52.420 Standards for Utilities.
- 15.52.430 Standards for Subdivisions.
- 15.52.440 Standards for Manufactured Homes.
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- 15.52.460 Floodways.

ARTICLE 5. VARIANCE AND APPEAL PROCEDURE

- 15.52.510 Nature of Variances.
- 15.52.520 Conditions for Variances.
- 15.52.530 Appeal Board.
- 15.52.540 Appeal Procedure.
- 15.52.550 Nonconforming Uses.
- 15.52.560 Property Rights.

ARTICLE 1. TITLE, FINDINGS OF FACT, PURPOSE AND METHODS

Section 15.52.110 Title.

This Chapter shall be known as the "Tehama County Floodplain Management Regulations."

Section 15.52.120 Findings of Fact.

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

These flood losses are caused by uses that are inadequately elevated, floodproofed, or protected from flood damage. The cumulative effect of obstructions in areas of special flood hazards which increase flood heights and velocities also contribute to the flood loss.

Section 15.52.130 Purpose.

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

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

Section 15.52.140 Methods of Reducing Flood Losses.

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

- A. To restrict or prohibit uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or flood heights or velocities;
- B. To require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
- C. To control the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel flood waters;
- D. To control filling, grading, dredging, and other development which may increase flood damage; and
- E. To prevent or regulate the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards in other areas.

ARTICLE 2. GENERAL PROVISIONS

Section 15.52.210 Definitions.

For the purpose of this chapter, certain terms, phrases, words and their derivatives shall be construed as specified in this section. Where terms are not defined, they shall have their ordinarily accepted meanings within the context with which they are used. *Webster's Third New International Dictionary of the English Language, Unabridged*, copyright 1986, shall be considered as providing ordinarily accepted meanings. Words used in the singular include the plural and the plural the singular. Words used in the masculine gender include the feminine and the feminine the masculine.

ACCESSORY USE means a use which is incidental and subordinate to the principal use of the parcel of land on which it is located.

APPEAL means a request for a review of the Floodplain Administrator's interpretation of any provision of this chapter.

AREA OF SHALLOW FLOODING means a designated AO or AH zone on the Flood Insurance Rate Map (FIRM). The base flood depths range from one to three feet; a clearly defined channel does not exist; the path of flooding is unpredictable and indeterminate; and velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

AREA OF SPECIAL FLOOD HAZARD - See "Special flood hazard area."

BASE FLOOD means a flood which has a one percent chance of being equaled or exceeded in any given year (also called the "100-year flood"). Base flood is the term used throughout this chapter.

BASEMENT means any area of the building having its floor below ground level on all sides.

BUILDING - see "Structure".

DEVELOPMENT means any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials.

ENCROACHMENT means the advance or infringement of uses, plant growth, fill, excavation, buildings, permanent structures or development into a floodplain, which may impede or alter the flow capacity of a floodplain.

EXISTING MANUFACTURED HOME PARK OR SUBDIVISION means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before the effective date of the floodplain management regulations adopted by a community.

EXPANSION TO AN EXISTING MANUFACTURED HOME PARK OR SUBDIVISION means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).

FLOOD, FLOODING, OR FLOOD WATER means a general and temporary condition of partial or complete inundation of normally dry land areas from the overflow of inland waters; the unusual and rapid accumulation or runoff of surface waters from any source.

FLOOD BOUNDARY AND FLOODWAY MAP (FBFM) means the official map on which the Federal Emergency Management Agency or Federal Insurance Administration has delineated both the areas of special flood hazards and the floodway.

FLOOD INSURANCE RATE MAP (FIRM) means the official map on which the Federal Emergency Management Agency or Federal Insurance Administration has delineated both the areas of special flood hazards and the risk premium zones applicable to the community.

FLOOD INSURANCE STUDY means the official report provided by the Federal Insurance Administration that includes flood profiles, the Flood Insurance Rate Map, the Flood Boundary and Floodway Map, and the water surface elevation of the base flood.

FLOODPLAIN OR FLOOD-PRONE AREA means any land area susceptible to being inundated by water from any source - see "Flooding".

FLOODPLAIN ADMINISTRATOR is the individual appointed to administer and enforce the floodplain management regulations.

FLOODPLAIN MANAGEMENT means the operation of an overall program of corrective and preventive measures for reducing flood damage and preserving and enhancing, where possible, natural resources in the floodplain, including but not limited to emergency preparedness plans, flood control works, floodplain management regulations, and open space plans.

FLOODPLAIN MANAGEMENT REGULATIONS means this chapter and other zoning ordinances, subdivision regulations, building codes, health regulations, special purpose chapter (such as grading and erosion control) and other application of police power which control development in flood-prone areas. This term describes federal, state or local regulations in any combination thereof which provide standards for preventing and reducing flood loss and damage.

FLOODPROOFING means any combination of structural and nonstructural additions, changes, or adjustments to structures, which reduce or eliminate flood damage to real estate or improved real

property, water and sanitary facilities, structures, and their contents.

FLOODWAY means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot. Also referred to as "Regulatory Floodway".

FLOODWAY FRINGE is that area of the floodplain on either side of the "Regulatory Floodway" where encroachment may be permitted.

FUNCTIONALLY DEPENDANT USE means a use which cannot perform its intended purpose unless it is located or carried out in close proximity to water. The term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers, and does not include long-term storage or related manufacturing facilities.

GOVERNING BODY is the local governing unit, i.e. county or municipality, that is empowered to adopt and implement regulations to provide for the public health, safety and general welfare of its citizenry.

HARDSHIP as related to Article 5, Variance and Appeal Procedure, of this chapter means the exceptional hardship that would result from a failure to grant the requested variance. The Board of Supervisors requires that the variance be exceptional, unusual, and peculiar to the property involved. Mere economic or financial hardship alone is not exceptional. Inconvenience, aesthetic considerations, physical handicaps, personal preferences, or the disapproval of one's neighbors likewise cannot, as a rule, qualify as an exceptional hardship.

HIGHEST ADJACENT GRADE means the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

HISTORIC STRUCTURE means any structure that is:

1. listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
2. certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
3. individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of Interior; or
4. individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either by an approved state program as determined by the Secretary of the Interior or directly by the Secretary of the Interior in states with approved programs.

LEVEE means a man-made structure, usually an earthen embankment, designed and constructed in accordance with sound engineering practices to contain, control or divert the flow of water so as to provide protection from temporary flooding.

LEVEE SYSTEM means a flood protection system, which consists of a levee, or levees, and associated structures, such as closure and drainage devices, which are constructed and operated in accord with sound engineering practices.

LOWEST FLOOR means the lowest floor of the lowest enclosed area, including basement (see "Basement" definition).

1. An unfinished or flood resistant enclosure below the lowest floor that is usable solely for parking of vehicles, building access or storage in an area other than a basement area, is not considered a building's lowest floor provided it conforms to applicable non-elevation design requirements, including, but not limited to:

- a. the wet floodproofing standard in Section 15.52.410(c)3.
- b. the anchoring standards in Section 15.52.410(a).
- c. the construction materials and methods standards in Section 15.52.410(b).
- d. the standards for utilities in Section 15.52.420.

2. For residential structures, all sub-grade, enclosed areas are prohibited as they are considered to be basements. This prohibition includes below-grade garages and storage areas.

MANUFACTURED HOME means a structure, transportable in one or more sections, which, in the traveling mode, is eight body feet or more in width, or 40 body feet or more in length, or, when erected on site, is 320 or more square feet, and which is built on a permanent chassis and designed to be used as a dwelling with or without a permanent foundation when connected to utilities, and includes

the plumbing, heating, air conditioning, and electrical systems contained therein. "Manufactured home" includes a mobilehome subject to the National Manufactured Housing Construction and Safety Act of 1974 (42 U.S.C., Sec. 5401, et seq.).

MANUFACTURED HOME PARK OR SUBDIVISION means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

MARKET VALUE shall be determined by estimating the cost to replace the structure in new condition and adjusting that cost figure by the amount of depreciation which has accrued since the structure was constructed. The cost of replacement of the structure shall be based on a square foot cost factor determined by reference to a building cost estimating guide recognized by the building construction industry. The amount of depreciation shall be determined by taking into account the age and physical deterioration of the structure and functional obsolescence as approved by the floodplain administrator, but shall not include economic obsolescence. Use of replacement costs or accrued depreciation factors different from those contained in recognized building cost estimating guides may be considered only if such factors are included in a report prepared by an independent professional appraiser and supported by a written explanation of the differences.

MEAN SEA LEVEL means, for purposes of the National Flood Insurance Program, the National Geodetic Vertical Datum (NGVD) of 1929 or other datum, to which base flood elevations shown on a community's Flood Insurance Rate Map are referenced.

MOBILEHOME means a structure that meets the requirements of a manufactured home. Mobilehome does not include a commercial coach, factory-built housing, or a recreational vehicle.

NEW CONSTRUCTION, for floodplain management purposes, means structures for which the "start of construction" commenced on or after the effective date of floodplain management regulations adopted by this community, and includes any subsequent improvements to such structures.

NEW MANUFACTURED HOME PARK OR SUBDIVISION means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after the effective date of floodplain management regulations adopted by this community.

OBSTRUCTION includes, but is not limited to, any dam, wall, wharf, embankment, levee, dike, pile, abutment, protection, excavation, channelization, bridge, conduit, culvert, building, wire, fence, rock, gravel, refuse, fill, structure, vegetation or other material in, along, across or projecting into any watercourse which may alter, impede, retard or change the direction and/or velocity of the flow of water, or due to its location, its propensity to snare or collect debris carried by the flow of water, or its likelihood of being carried downstream.

ONE HUNDRED YEAR FLOOD or "100-year flood" - see "Base flood."

PUBLIC SAFETY AND NUISANCE as related to Article 5, Variance and Appeal Procedure, of this chapter means that the granting of a variance must not result in anything which is injurious to safety or health or unlawfully obstructs the free passage or use, in the customary manner, of any navigable lake, or river, bay, stream, canal, or basin.

RECREATIONAL VEHICLE means either of the following:

(a) A motor home, travel trailer, truck camper, or camping trailer, with or without motive power, designed for human habitation for recreational, emergency or temporary occupancy, which meets all of the following criteria:

1. It contains less than 320 square feet of internal living room area, excluding built-in equipment, including, but not limited to, wardrobe, closets, cabinets, kitchen units or fixtures, and bath or toilet rooms.

2. It contains 400 square feet or less of gross area measured at maximum horizontal projections.

3. It is built on a single chassis.

4. It is either self-propelled, truck-mounted, or permanently towable on the highways without a permit.

(b) A park trailer designed for human habitation for recreational or seasonal use only, which meets all of the following criteria:

1. It contains 400 square feet or less of gross floor area measured at the maximum horizontal projections. However, it may not exceed 12 feet in width or 40 feet in length in the traveling mode.

2. It is built on a single chassis.
3. It may only be transported upon public highways with a permit.

REGULATORY FLOODWAY means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot.

REMEDY A VIOLATION means to bring the structure or other development into compliance with state or local floodplain management regulations, or, if this is not possible, to reduce the impacts of its noncompliance. Ways that impacts may be reduced include protecting the structure or other affected development from flood damages, implementing the enforcement provisions of the chapter or otherwise deterring future similar violations, or reducing state or federal financial exposure with regard to the structure or other development.

RIVERINE means relating to, formed by, or resembling a river (including tributaries), stream, brook, etc.

SPECIAL FLOOD HAZARD AREA (SFHA) means an area of land that would be inundated by a 100-year flood, and shown on an FHBM or FIRM as Zone A, A1-A30, AE, AO, AH.

START OF CONSTRUCTION includes substantial improvement and other proposed new development and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, or other improvement was within 180 days from the date of the permit issuance. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufacture home on a foundation. Permanent construction does not include land preparation, such as clearing, grading, and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

STRUCTURE means a walled and roofed building that is principally above ground; this includes a gas or liquid storage tank or a manufactured home.

SUBSTANTIAL DAMAGE means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

SUBSTANTIAL IMPROVEMENT means any reconstruction, rehabilitation, addition, or other proposed new development of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the "start of construction" of the improvement. This term includes structures which have incurred "substantial damage", regardless of the actual repair work performed. The term does not, however, include either

1. any project for improvement of a structure to correct existing violations or state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions, or
2. any alteration of an "historic structure", provided that the alteration will not preclude the structure's continued designation as an "historic structure".

VARIANCE means a grant of relief from the requirements of this chapter which permits construction in a manner that would otherwise be prohibited by this chapter.

VIOLATION means the failure of a structure or other development to be fully compliant with this chapter. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in this chapter is presumed to be in violation until such time as that documentation is provided.

WATER SURFACE ELEVATION means the height, in relation to the National Geodetic Vertical Datum (NGVD) of 1929, (or other datum, where specified) of floods of various magnitudes and frequencies in the floodplains of coastal or riverine areas.

WATERCOURSE means a lake, river, creek, stream, wash, arroyo, channel or other topographic feature on or over which waters flow at least periodically. Watercourse includes specifically

designated areas in which substantial flood damage may occur.

Section 15.52.220 Lands to Which This Chapter Applies.

This chapter shall apply to all areas of special flood hazards within the jurisdiction of the County of Tehama.

Section 15.52.230 Basis for Establishing the Areas of Special Flood Hazard.

The areas of special flood hazard identified by the Federal Insurance Administration (FIA) of the Federal Emergency Management Agency (FEMA) in the Flood Insurance Study (FIS) dated May 5, 2003 is hereby adopted by reference and declared to be part of this chapter. In addition, the accompanying Flood Insurance Rate Maps (FIRMs) and Flood Boundary and Floodway Maps (FBFMs), with map indexes dated May 5, 2003, are hereby adopted by reference and declared to be a part of this chapter. This FIS and attendant mapping is the minimum area of applicability of this chapter and may be supplemented by studies for other areas which allow implementation of this chapter and which are recommended to the Board of Supervisors by the Floodplain Administrator. The study, FIRMs and FBFMs are on file at the Tehama County Department of Building and Safety, 444 Oak Street, Room H, Red Bluff, California

Section 15.52.240 Violations.

No structure or land shall hereafter be constructed, located, extended, converted, or altered without full compliance with the terms of this chapter and other applicable regulations. Violation of the provisions of this chapter or failure to comply with any of its requirements shall constitute a misdemeanor. Each day such violation continues shall be considered a separate offense. Any violation of the provisions of this chapter is declared to be a nuisance and may be abated. Nothing herein contained shall prevent the County of Tehama from taking such lawful actions as are necessary to prevent or remedy any violations.

Section 15.52.250 Abrogation and Greater Restrictions.

This chapter is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this chapter and another ordinance conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

Section 15.52.260 Interpretation.

In the interpretation and application of this chapter, all provisions shall be:

1. considered as minimum requirements;
2. liberally construed in favor of the governing body; and
3. deemed neither to limit nor repeal any other powers granted under state statutes.

Section 15.52.270 Warning and Disclaimer of Liability.

The degree of flood protection required by this chapter is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur. Flood heights may be increased by man-made or natural causes. This chapter does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages.

Section 15.52.280 Severability.

This chapter and the various parts thereof are hereby declared to be severable. Should any section of

this chapter be declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of the chapter as a whole, or any portion thereof other than the section so declared to be unconstitutional or invalid.

ARTICLE 3. ADMINISTRATION

Section 15.52.310 Establishment of Development Permit.

A development permit shall be obtained before any construction or other development begins within any area of special flood hazard established in Section 15.52.230. Application for a development permit shall be made on forms furnished by the Floodplain Administrator and may include, but not be limited to: plans in duplicate drawn to scale showing the nature, location, dimensions, and elevation of the area in question; existing or proposed structures, fill, storage of materials, drainage facilities; and the location of the foregoing. Specifically, the following information is required:

1. Site plan, including but not limited to:
 - a. for all proposed structures, spot ground elevations at 20-foot or smaller intervals along the foundation footprint, or one foot contour elevations throughout the building site; and
 - b. proposed locations of water supply, sanitary sewer, and utilities; and
 - c. if available, the base flood elevation from the Flood Insurance Study and/or Flood Insurance Rate Map; and
 - d. if applicable, the location of the regulatory floodway; and
2. Foundation design detail, including but not limited to:
 - a. proposed elevation in relation to mean sea level, of the lowest floor including basement) of all structures; and
 - b. for a crawl-space foundation, location and total net area of openings as required in Section 15.52.410(c)3 of this chapter and FEMA Technical Bulletins 1-93 and 7-93; and
 - c. for foundations placed on fill, the location and height of fill, and compaction requirements (compacted to 95 percent using Standard Proctor Test method); and
3. Proposed elevation in relation to mean sea level to which any nonresidential structure will be floodproofed, as required in Section 15.52.410(c)2 of this chapter and FEMA Technical Bulletin 3-93; and
4. all appropriate certifications listed in Section 15.52.330.(d) of this chapter; and
5. description of the extent to which any watercourse will be altered or relocated as a result of proposed development.

Section 15.52.320 Designation of the Floodplain Administrator.

The Building Official is hereby appointed to administer, implement, and enforce this chapter by granting or denying development permits in accord with its provisions.

Section 15.52.330 Duties and Responsibilities of the Floodplain Administrator.

- (a) Permit Review. Review all development permits to determine that:
 1. permit requirements of this chapter have been satisfied,
 2. all other required state and federal permits have been obtained,
 3. the site is reasonably safe from flooding, and
 4. the proposed development does not adversely affect the carrying capacity of areas where base flood elevations have been determined but a floodway has not been designated. For purposes of this chapter, "adversely affects" means that the cumulative effect of the proposed development when combined with all other existing and anticipated development will increase the water surface elevation of the base flood more than one foot at any point.
- (b) Review and Use of Any Other Base Flood Data. When base flood elevation data has not

been provided in accordance with Section 15.52.230, the Floodplain Administrator shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a federal or State agency, or other source, in order to administer Article 4.

If no base flood elevation data is available from a federal or State agency or other source, then a base flood elevation shall be obtained using any of the methods from the FEMA publication 'Managing Floodplain Development In Approximate Zone A areas - A Guide For Obtaining And Developing Base (100-year) Flood Elevations,' dated July 1995.

(c) Notification of Other Agencies. In alteration or relocation of a watercourse:

1. notify adjacent communities and the California Department of Water Resources prior to alteration or relocation;
2. submit evidence of such notification to the Federal Insurance Administration, Federal Emergency Management Agency within six months after the data becomes available; and
3. assure that the flood carrying capacity within the altered or relocated portion of said watercourse is maintained.

(d) Documentation of Floodplain Development. Obtain and maintain for public inspection and make available as needed the following:

1. certification required by Section 15.52.410(c)1 (lowest floor elevations),
2. certification required by Section 15.52.410(c)2 (elevation or floodproofing of nonresidential structures),
3. certification required by Sections 15.52.410(c)3 (wet floodproofing standard),
4. certification of elevation required by Section 15.52.430(b) (subdivision standards),
5. certification required by Section 15.52.460 (floodway encroachments).

(e) Map Determinations. Make interpretations, where needed, as to the exact location of the boundaries of the areas of special flood hazard, for example, where there appears to be a conflict between a mapped boundary and actual field conditions. The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in Article 5, Variance and Appeal Procedure.

(f) Remedial Action. Take action to remedy violations of this chapter as specified in Section 15.52.240.

ARTICLE 4. PROVISIONS FOR FLOOD HAZARD REDUCTION

Section 15.52.410 Standards of Construction.

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

(a) Anchoring.

1. All new construction and substantial improvements shall be adequately anchored to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy.
2. All manufactured homes shall meet the anchoring standards of Section 15.52.440.

(b) Construction materials and methods. All new construction and substantial improvement shall be constructed:

1. with materials and utility equipment resistant to flood damage.
2. using methods and practices that minimize flood damage;
3. with electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding; and if
4. within zones AH or AO, so that there are adequate drainage paths around structures on slopes to guide floodwaters around and away from proposed structures.

(c) Elevation and floodproofing. (See section 15.52.210 Definitions for "basement," "lowest floor," "new construction," "substantial damage" and "substantial improvement".)

I. Residential construction, new or substantial improvement, shall have the lowest floor, including basement,

- A. in an A zone, elevated to or above the base flood elevation; said base flood elevation shall be determined by one of the methods in Section 15.52.330(b) of this

chapter.

B. in all other Zones, elevated to or above the base flood elevation.

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

2. Nonresidential construction, new or substantial improvement, shall either be elevated to conform with Section 15.52.410(c)1 or together with attendant utility and sanitary facilities:

A. be floodproofed below the elevation recommended under Section 15.52.410(c)1 so that the structure is watertight with walls substantially impermeable to the passage of water;

B. have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and

C. be certified by a registered professional engineer or architect that the standards of this section are satisfied. Such certification shall be provided to the Floodplain Administrator.

3. All new construction and substantial improvement with fully enclosed areas below the lowest floor (excluding basements) that are usable solely for parking of vehicles, building access or storage, and which are subject to flooding, shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwater. Designs for meeting this requirement may follow the guidelines in FEMA Technical Bulletins 1-93 and 7-93, however in any event, must meet or exceed the following minimum criteria:

A. be certified by a registered professional engineer or architect; or

B. have a minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding. The bottom of all openings shall be no higher than one foot above grade. Openings may be equipped with screens, louvers, valves or other coverings or devices provided that they permit the automatic entry and exit of floodwater.

4. Manufactured homes shall also meet the standards in Section 15.52.440.

Section 15.52.420 Standards for Utilities.

(a) Water supply and sanitary sewage. All new and replacement water supply and sanitary sewage systems shall be designed to minimize or eliminate:

1. infiltration of flood waters into the systems, and
2. discharge from the systems into flood waters.

(b) On site waste disposal systems. On-site waste disposal systems shall be located to avoid impairment to them, or contamination from them during flooding.

Section 15.52.430 Standards for Subdivisions.

(a) All preliminary subdivision proposals and other proposed developments (including proposals for manufactured home parks and subdivisions) greater than 50 lots or 5 acres, whichever is lesser shall identify the flood hazard area and the elevation of the base flood.

(b) All subdivision plans will provide the elevation of proposed structure(s) and pad(s). If the site is filled above the base flood elevation, the lowest floor and pad elevations shall be certified by a registered professional engineer or surveyor and provided to the Floodplain Administrator.

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

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

(e) All subdivisions shall provide adequate drainage to reduce exposure to flood hazards.

Section 15.52.440 Standards for Manufactured Homes.

(a) All manufactured homes that are placed or substantially improved, within Zones A, A1-30, AE, AO

and AH on the community's Flood Insurance Rate Map, on sites located

1. outside of a manufactured home park or subdivision,
2. in a new manufactured home park or subdivision,
3. in an expansion to an existing manufactured home park or subdivision, or
4. in an existing manufactured home park or subdivision on a site upon which a manufactured home has incurred "substantial damage" as the result of a flood,

shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated to or above the base flood elevation and be securely fastened to an adequately anchored foundation system to resist flotation collapse and lateral movement.

(b) All manufactured homes to be placed or substantially improved on sites in an existing manufactured home park or subdivision within Zones A, A1-30, AE, AO and AH on the community's Flood Insurance Rate Map that are not subject to the provisions of paragraph 15.52.440(a) will be securely fastened to an adequately anchored foundation system to resist flotation collapse and lateral movement, and elevated so that either the:

1. lowest floor of the manufactured home is at or above the base flood elevation, or
2. manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than 36 inches in height above grade.

Section 15.52.450 Standards for Recreational Vehicles.

All recreational vehicles placed on sites within Zones A, A1-30, AE, AO and AH on the community's Flood Insurance Rate Map will be on the site for fewer than 180 consecutive days, and be fully licensed and ready for highway use -- a recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions.

Section 15.52.460 Floodways.

Located within areas of special flood hazard established in Section 15.52.230 are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of flood waters which carry debris, potential projectiles, and erosion potential, the following provisions apply:

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

2. If subsection 1 of section 15.52.460 is satisfied, all new construction, substantial improvement, and other proposed new development shall comply with all other applicable flood hazard reduction provisions of Article 4.

ARTICLE 5. VARIANCE AND APPEAL PROCEDURE

Section 15.52.510 Nature of Variances.

The variance criteria set forth in this section are based on the general principle of zoning law that variances pertain to a piece of property and are not personal in nature. A variance may be granted for a parcel of property with physical characteristics so unusual that complying with the requirements of this chapter would create an exceptional hardship to the applicant or the surrounding property owners. The characteristics must be unique to the property and not be shared by adjacent parcels. The unique characteristic must pertain to the land itself, not to the structure, its inhabitants, or the property owners.

The granting of a variance shall not cause fraud on or victimization of the public. In examining this requirement, the Board of Supervisors will consider the fact that every newly constructed building adds to government responsibilities and remains a part of the community for fifty to one hundred years. Buildings that are permitted to be constructed below the base flood elevation are subject during all those years to increased risk of damage from floods, while future owners of the property and the

community as a whole are subject to all the costs, inconvenience, danger, and suffering that those increased flood damages bring. In addition, future owners may purchase the property, unaware that it is subject to potential flood damage, and can be insured only at very high flood insurance rates.

It is the duty of the Board of Supervisors to help protect its citizens from flooding. This need is so compelling and the implications of the cost of insuring a structure built below flood level are so serious that variances from the flood elevation or from other requirements in the flood ordinance are quite rare. The long term goal of preventing and reducing flood loss and damage can only be met if variances are strictly limited. Therefore, the variance guidelines provided in this ordinance are more detailed and contain multiple provisions that must be met before a variance can be properly granted. The criteria are designed to screen out those situations in which alternatives other than a variance are more appropriate.

Section 15.52.520 Conditions for Variances

(a) Variances may be issued for the repair, rehabilitation or restoration of "historic structures" (as defined in section 15.52.210 of this chapter) upon a determination that the proposed repair, rehabilitation or restoration will not preclude the structure's continued designation as an historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure.

(b) Variances shall not be issued within any mapped regulatory floodway if any increase in flood levels during the base flood discharge would result.

(c) Variances shall only be issued upon a determination that the variance is the "minimum necessary" considering the flood hazard, to afford relief.

(d) Variances shall only be issued upon:

1. A showing of good and sufficient cause;

2. A determination that failure to grant the variance would result in exceptional "hardship" (as defined in section 15.52.210 of this chapter) to the applicant; and

3. A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, or extraordinary public expense, create a nuisance (as defined in section 15.52.210 - see "Public Safety and Nuisance"), cause fraud or victimization of the public, or conflict with the existing local laws or ordinances.

(e) Variances may be issued for new construction, substantial improvement, and other proposed new development necessary for the conduct of a functionally dependent use provided that the provisions of subsections (a) through (f) section 15.52.530 are satisfied and that the structure or other development is protected by methods that minimize flood damages during the base flood and does not result in additional threats to public safety and does not create a public nuisance.

(f) Generally, variances may be issued for new construction and substantial improvements to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing items 1 through 11 of subsection (c) of section 15.52.530 have been fully considered. As the lot size increases beyond the one-half acre, the technical justification required for issuing the variance increases.

Section 15.52.530 Appeal Board.

(a) The Board of Supervisors of the county shall hear and decide appeals and requests for variances from the requirements of this chapter.

(b) The Board of Supervisors of the county shall hear and decide appeals when it is alleged there is an error in any requirement, decision, or determination made by the floodplain administrator in the enforcement or administration of this chapter.

(c) In passing upon such appeals and variances, the Board of Supervisors shall consider all technical evaluations, all relevant factors, standards specified in other sections of this chapter, and

1. The danger that materials may be swept onto other lands to the injury of others;

2. The danger of life and property due to flooding or erosion damage;

3. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the existing individual owner and future owners of the property;

4. The importance of the services provided by the proposed facility to the community;
5. The necessity to the facility of a waterfront location, where applicable;
6. The availability of alternative locations for the proposed use which are not subject to flooding or erosion damage;
7. The compatibility of the proposed use with existing and anticipated development;
8. The relationship of the proposed use to the comprehensive plan and floodplain management program for that area;
9. The safety of access to the property in time of flood for ordinary and emergency vehicles;
10. The expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters, and allowance for debris, if applicable, expected at the site;
11. The costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, and water system, and streets and bridges.

(d) Upon consideration of the factors of Section 15.52.530(c) and the purposes of this chapter, the Board of Supervisors may attach such conditions to the granting of variances as it deems necessary to further the purposes of this chapter.

(e) The floodplain administrator shall maintain the records of all appeal actions and report any variance to the Federal Insurance Administration upon request.

(f) Any applicant to whom a variance is granted shall be given written notice over the signature of a community official that:

1. the issuance of a variance to construct a structure below the base flood level will result in increased premium rates for flood insurance up to amounts as high as \$ 25 for \$ 100 for insurance coverage, and
2. such construction below the base flood level increases risks to life and property, and
3. insurance premium rates are determined by statute according to actuarial risk and will not be modified by the granting of a variance.

A copy of the notice shall be recorded by the floodplain administrator in the office of the Tehama County Recorder and shall be recorded in a manner so that it appears in the chain of title of the affected parcel of land.

Section 15.52.540 Appeal Procedure.

(a) Those aggrieved by a decision of any county department pursuant to this chapter may appeal such decision upon payment of a fee of one hundred dollars to the Board of Supervisors of the county.

(b) In passing upon such appeal, the Board of Supervisors shall consider all items delineated in sections 15.52.520 and 15.52.530 of this chapter.

Section 15.52.550 Nonconforming Uses.

A structure or the use of a structure or premises which was lawful before the passage or amendment of Chapter 15.52 of the Tehama County code and/or these rules but which is not in conformity with their provisions, may be continued as a non-conforming use subject to the following conditions:

1. No such use shall be expanded, changed, enlarged or altered in any way. 2. Any substantial improvement of a non-conforming structure shall be made in compliance with the provisions of this chapter.

3. If any non-conforming use or structure is destroyed by any means, including flood, to the extent of fifty percent or more of its market value immediately prior to the destruction, it shall not be reconstructed except in conformity with the provisions of this chapter.

Section 15.52.560 Property Rights.

The Board of Supervisors finds and declares that this chapter is not intended, and shall not be construed, as authorizing the County to exercise its power to adopt, amend or repeal this chapter or implement administrative regulations in a manner which will take or damage private property for public use without the payment of just compensation therefor. This section is not intended to increase or

decrease the rights of any owner of property under the Constitution of the state of California or of the United States.

SECTION 3. This ordinance shall take effect July 1, 1999, and prior to the expiration of fifteen (15) days from the adoption thereof shall be published for at least one time in the Red Bluff Daily News, a newspaper of general circulation in Tehama County.

The above and foregoing ordinance was duly passed and adopted by the Board of Supervisors of the County of Tehama, State of California, at a regular session of said Board on the 25th day of May 1999 by the following vote:

AYES: Supervisors McIver, Borrer, Russell, Willard and Turner

NOES: None

ABSENT OR NOT VOTING: None

Ross Turner

CHAIRMAN, Board of Supervisors

ATTEST:

MARY ALICE GEORGE, County Clerk and
Ex-officio Clerk of the Board of
Supervisors of the County of Tehama.
State of California.

Jennifer E. Burnett

By _____
Deputy
Ordinance #1708