City of Placerville
Hazard Mitigation Plan

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I. Introduction

Background

The Disaster Mitigation Act of 2000 requires local government to have a Local Hazard Mitigation Plan. This plan must be approved by the Federal Emergency Management Agency (FEMA), in order for local government to be eligible to received federal disaster relief funds as well as federal hazard mitigation project funding.

The City of Placerville participated in the development of a county wide Hazard Mitigation Plan as well as created a stand alone plan in 2005. The City of Placerville's Hazard Mitigation Plan was placed in the county wide plan as an addendum. This revised edition supersedes the 2005 plan.

Purpose

The purpose of the City of Placerville Hazard Mitigation Plan is to provide a planning document that will assist City Officials, residents, and business owners in offsetting future costs by using lessons learned from past historical events and applying those lessons to future events.

Through the process of mitigation, the City of Placerville is prepared to take corrective steps to lessen the effects and costs of future events.

Scope

The City of Placerville Hazard Mitigation Plan addresses natural and man-made hazards which can and/or have occurred within the City of Placerville and areas that those natural or man-made hazards will influence.

Participants in the Planning Process

The following list represents all participates in the City level planning process.

2004 Participants

Chief George Nielsen	Placerville Police Department
Captain Mike Scott	Placerville Police Department
PSSS Linda VanHorn	Placerville Police Department
DRL Cyndy Bryant	Placerville Police Department
DRT Aaron Pratt	Placerville Police Department
Bat Chief Mark Johnson	El Dorado County Fire Protection District

Steve Calfee	City of Placerville – Community Development Director
Gary Valladeo	City of Placerville – Public Works Director
Robert Shinkle	City of Placerville – Senior Engineering Tech
Sgt. Marty Hackett	EDSO OES
Dep. Scott Stewart	EDSO OES
Dep. Todd Crawford	EDSO OES
George Wheeldon	Citizen – Geologist
Rowland Maddox	Citizen – Mapping Expert
Patty Noble	Citizen – Insurance Rep.
Jim Hill	Citizen – Inter-county Title Company

2009 Participants

Chief George Nielsen	Placerville Police Department
Captain Mike Scott	Placerville Police Department
PSSS Aaron Pratt	Placerville Police Department
Marty Hackett	EDSO OES (Retired)
Mike Bristow	EID Safety/Security Manager
Steve Calfee	City of Placerville – Community Development Director
Mark Ivani	City of Placerville – Mapping Expert
Lt Bryan Golmitz	EDSO OES
Sgt Bernie Morton	EDSO OES
Dep. Jaime Morgan	EDSO OES
Dep. Matt Cathey	EDSO OES
Dpt. Fire Marshall Baldock	El Dorado County Fire Protection District
Prestine Skinner	El Dorado County Mental Health
Jose Crummett	El Dorado County GIS Mapping
Candace Rivas	Marshall Hospital
Scott Carlin	Citizen – Insurance Rep (AAA Insurance)

Each participant either attended a Hazard Mitigation Planning Meeting or provided information included in the updated Hazard Mitigation Plan.

Description of the Planning Process

The City's planning process, consisted of the following meetings:

2004 Meetings

May 13, 2004:	Initial County-wide orientation meeting
June 2, 2004:	County-wide work group meeting
July 7, 2004:	City planning meeting – drought, flooding, severe winter storm and land subsidence.

July 21, 2004:	City planning meeting – earthquakes
August 16, 2004:	City planning meeting – wildfires
August 31, 2004:	County-wide work group meeting
September 27, 2004:	City planning meeting – hazard mitigation document review
March 10, 2005:	Local Disaster Council meeting – document/process review
April 14, 2005:	Local Disaster Council meeting – document/process review
May 10, 2005:	City of Placerville City Council meeting – City of Placerville Hazard Mitigation Plan document approval and adoption.

2009 Meetings

May 4, 2009:	Initial County-wide orientation/update meeting
May 21, 2009:	County-wide work group meeting
June 8, 2009:	County-wide work group meeting
June 9, 2009:	City of Placerville City Council meeting – update review and public input
June 25, 2009:	County-wide work group meeting
July 13, 2009:	County-Wide work group meeting
July 28, 2009:	City of Placerville special meeting – public input (Advertised in the Mountain Democrat July 22, 2009)
August 4, 2009:	County-wide work group meeting
August 18, 2009:	County-wide work group meeting
August 25, 2009:	City of Placerville City Council meeting – adoption

The City of Placerville Hazard Mitigation Planning Team reviewed and updated each section as needed. Each section of the Hazard Mitigation Plan was analyzed and specialists in those updated sections were contacted and any new mitigation strategies were inputted in the plan.

II. Hazard Identification and Analysis

Criteria for Qualitative Assessment

	Assigned Value	Definition
Likelihood of Occurrence		
Highly likely	3	Near 100% annual probability
Likely	2	Between 10 and 100% annual probability
Possible	1	Between 1 and 10% annual probability
Unlikely	0	Less than 1% annual probability
Spatial Extent		
Large	3	More than 50% of area affected
Moderate	2	Between 10 and 50% of area affected
Small	1	Less than 10% of area affected
Potential Impact		
Catastrophic	4	High Numer of deaths/injuries possible. Most than 50% of property in affected areas damaged or destroyed. Complete shutdown of facilities for 30 days or more
Critical	3	Multiple number of deaths/injuries possible. More than 25% of property in affected area damaged or destroyed. Complete shutdown of facilities for more than one week.
Limited	2	Minor injuries only. More than 10% of property in affected area damaged or destroyed. Complete shutdown of facilities for more than one day.
Minor	1	Very few injuries, if any. Only minor property damage and minimal disruption on quality of life. Temporary shutdown of facilities

Hazard Risk Ratings

Hazard	Likelihood	Spatial Extent	Potential Impact	Hazard Rating
Wildfire	2	2	4	8
Flood	2	2	2	6
Disease Outbreak	1	2	3	6
Sever Winter Storm	1	3	1	5
Terrorism	0	2	3	5
Earthquake	0	2	2	4
Drought	0	3	1	4
Land Subsidence	0	1	1	2

Estimated Risk Levels for the City of Placerville

High Risk Hazards	8-10
Moderate Risk Hazards	5-7
Low Risk Hazards	1-4

III. Community Vulnerability Assessment

Methodologies Used

In order to perform an objective analysis of this project and determine the potential impacts upon the City, the following tasks were completed:

1. Risk Assessment of the Community
2. Review of past incidents
3. Review of City Infrastructure
4. Drive to each potential hazard location to evaluate potential hazard
5. Evaluate needs to offset potential hazard
6. Obtain and review data regarding Natural Hazards Locally
7. Develop Goals, Objectives and Levels of Service to assist in evaluating the City's capabilities and impacts.
8. Determine reconstruction costs for post incident losses

Overview of Jurisdiction

The City of Placerville is located in the western foothill region of the Sierra Nevada Mountains. At 1,866-foot elevation, the City is comprised of moderate to steep, heavily vegetated, terrain. Placerville has an area of approximately 8.72 square miles and a population of 10,000 people. Since Placerville is a historical city and the county seat the daily population swells to over 20,000 people. Please refer to Appendix A page 1 for a map outlining the city limits for the City of Placerville.

Development Trends

Development within the City of Placerville consists of new and infill projects in both the commercial and residential areas. New commercial development is concentrated to the south side of Placerville Drive and the Point View Drive area. New residential development is concentrated to the outlining areas of Placerville and is pushing towards the city limits mostly in the areas of Bedford Avenue, the Lumsden property off Wiltse Road, the property south of Blairs Lane, and the property west of Mallard Lane.

Development in the City of Placerville will have the following affects on anticipated hazards which will have the most potential impact on the City:

Wildfires: New development and current buildings within areas considered high fire dangers are subject to special review that addresses the issues of combustible wood frame buildings, fire retardant roof coverings and groundcover, and clearance around the structures to reduce the risk of fire damage. Please refer to Appendix A page 2 for an overview fire map of the City of Placerville.

Flooding: The City of Placerville participates in and will continue to participate in the National Flood Insurance Program; all information regarding the National Flood Insurance Program can be located at City Hall. New development and current buildings within areas considered to be in the 100-year flood plane are subject to special review that addresses issues of flood proofing and channel improvements to reduce the risk of flood damage. Drainage and soil compaction are also considered in new developments. Please refer to Appendix A page 3 for an overview flood map for the City of Placerville.

Pandemic: New development and current populations bring a large number of people in contact with one other allowing for the spread of disease.

Severe Winter Storm: New development and current buildings within the City of Placerville should all be prepared for the affects of a Severe Winter Storm and should ensure that all buildings are structurally sound to withstand the affects of a major storm.

Terrorism: New development and current buildings within the City of Placerville should all be prepared for an act of terrorism and should ensure that all security procedures and safety standards are met to withstand the effects of an act of terrorism.

Earthquake: New development and current buildings are subject to special review that addresses issues of strengthening, changing the use of, and ensuring structural soundness to reduce the risk of a seismically-induced ground failure and shaking. Please refer to Appendix A page 4 for an overview map of the fault zones in El Dorado County.

Drought: New Development and current building within the City of Placerville should all be prepared for the affects of a drought and should use native and drought resistant plants in landscaping designs.

Land Subsidence: New development in the City of Placerville is required to submit a soil and foundation engineering report as well as a grading, erosion, and sediment control plan.

High Potential Loss Properties
Critical Facilities and Hazmat Sites

1) **Governmental Facilities**
   - A) City Hall
   - B) Public Works/Corporation Yard

C) Town Hall
D) US Post Office
E) El Dorado County Fire Department Station 25
F) Placerville Police Department
G) El Dorado County Government Offices
H) County Buildings, including Superior Court, Fairlane Court
I) Superior Court, Main Street
J) District Attorneys Office
K) Fairgrounds
L) Animal Control
M) Public Health
N) Mental Health
O) Library
P) Juvenile Hall
Q) County Jail
R) Social Services
S) Chamber of Commerce
T) El Dorado County Sheriffs Office
U) CHP
V) USFS

2) **Schools & Day Care Facilities**

A) El Dorado High School
B) Sierra Elementary School
C) El Dorado Adventist School
D) Schnell Elementary
E) Markahm Middle School
F) Happy Kids Day Care
G) Federated Church Preschool
H) First Friends Preschool
I) Montessori County Day School
J) Montessori of Placerville
K) A Tutoring Place
L) Mother Lode Union District Office
M) Placerville Union Elementary School District
N) Creative Kids
O) Montessori Christian
P) Placerville Union School Transportation

3) **Apartment Complexes**

A) Carson Ridge Apts
B) Cottonwood Sr. Apts
C) Cottonwood Apts
D) Deerview Park Apts
E) Placer Village Apts
F) Placerville Apts
G) Ridgecrest Apts

H) Ridgeview Manor
I) Sunrise Apts
J) Sunrise Garden Apts
K) Tunnel St Senior Apts
L) Woodridge East Apts

4) **Senior Homes and Assisted Living**
A) El Dorado Convalescent
B) Placerville Pines
C) Sunshine Manor
D) Sierra Manor
**There are several other single family residences that house non-ambulatory residents. Snowline Hospice has a list of these residences.

5) **Utilities / Services**
A) Hunt & Sons Inc. bulk fuel storage
B) Sierra Energy
C) Suburban Propane
D) El Dorado Irrigation District
E) City Waste Water Treatment Plant
F) City Water Treatment Plant
G) Amerigas
H) PG&E Station
I) Marshall Hospital and its properties

6) **Commercial Complexes**
A) Broadway Plaza
B) County Fair Shopping Center
C) Hangtown Village Square
D) Discovery Plaza
E) Venture Village
F) Carriage Trade Center

Vulnerability to Hazards

Wildfires:
A wildfire is the most dangerous hazard that is likely to occur within the City of Placerville. The impact of a wildfire is great, with the potential to cause high number of deaths/injuries and/or property damage.

- Located at 1,866-foot elevation and heavily vegetated, the City of Placerville is classified as a high fire hazard area. This places a majority of the City, including some business districts, at high risk.
- The identified areas of the City of Placerville that have been listed as a high risk for wildfire is the entire City except the Eskaton Development, Lions Park and the west end of Placerville Dr, Ray Lawyer Dr. and the west portion of Forni Road in the city limits.

- The likelihood that a wildfire would cause catastrophic damage is greatly influenced by fuel moisture, temperature, humidity, topography, wind and human behavior.
- Areas of thick vegetation are more prone to suffer from a wildfire.
- There have been wild land fires that have occurred in the past. Prior events listed in this report will include 2004 to present.
- Wild land fires are impossible to predict however during certain conditions a major wildfire is more probable and should be prepared for.

Prior Events

- July 14, 2004 – Coon Hollow – Loss Value $14,000
- July 17, 2007 – Coon Hollow – Loss Value $7,600
- August 24, 2008 – Schnell School Road – Loss Value $200
- August 31, 2008 – Clay Street, Mosquito Road, and Morrene Street – Loss Value $5,200

Flooding:

Flooding is the second most dangerous hazard likely to occur within the City of Placerville.

- The City of Placerville does have identified 100 and 500 year flood zones.
- There is one stream that flows thru the City of Placerville, Hangtown Creek. There are 3 tributaries that feed Hangtown Creek, Hangtown Creek Tributary, Randolph Canyon and Cedar Ravine.
- The areas of greatest risk for flooding are:
    - All of Smith Flat in the City, Broadway west of Smith Flat to Main St, the entire length of Main St, Highway 50 from Bedford Ave to Placerville Dr off ramp, Placerville Dr from Highway 50 to Pierroz Rd, and Pierroz Rd, would be affected by Hangtown Creek.
    - Airport Rd, and Broadway from Airport Rd. to where it connects with Hangtown Creek at Smith Flat would be affected by Hangtown Creek Tributary.
    - Mosquito Rd from the City limits to Broadway where it connects with Hangtown Creek would be affected by Randolph Canyon.
    - Cedar Ravine from the City limits to where it connects with Hangtown Creek at Main St would be affected by Cedar Ravine.
- There has been flooding in the City of Placerville in the past. Prior events listed in this report will include 2004 to present.
- Floods are impossible to predict, however under certain conditions a flood could occur and should be prepared for.
- The city of Placerville has taken previous flooding events, compared that to the FEMA flood map and has identified 246 developed property lots that are vulnerable during a 100 year flood event. A value for all 246 lots was then obtained from the Assessors office. If all 246 lots were affected by a 100 year flood the assessed damaged would be approximately $76,742,141.

Prior Events

- January 2006, Winter Storm
- March 2006, Spring Storm
- January 2008, Winter Storm
    - January 3, 2008, Basement flooding at the El Dorado County DA's Office. $1000 damage.
    - January 3, 2008, Overtime costs to city $1,109.
    - January 3, 2008, Roof Damage at El Dorado County Building B $700.

Disease Outbreak

A pandemic is the third most dangerous hazard that is likely to occur within the City of Placerville.

- The City of Placerville has a high number of retired and elderly individuals, who are more susceptible to disease.
- With the City of Placerville being a tourist destination in the Historic Gold Country, there is a large influx of people that may carry a communicable disease into the area.
- With the increase of residential development and community meeting halls, contact among large groups of people is more likely.
- A large pandemic will have major effects on the local economy and could have the potential to shut down major facilities.
- A large pandemic could have the possibility to overwhelm Marshall Hospital's response.
- Damage to public and private property would be very minimal, however there is a potential for loss of life.
- A large pandemic may happen in the future and preparation should be made to lessen the impact of a pandemic.
- A pandemic is impossible to predict however with simple safety measures and precautions, the effects of a pandemic could be minimized.

Prior Events

- No prior history is available

Severe Winter Storm:

A Sever Winter Storm is the fourth most dangerous hazard likely to occur within the City of Placerville.

- Placerville, which is located at the 1866 foot elevation in the western foothill region of the Sierra Nevada, has the potential to be affected by a Severe Winter Storm.
- A Severe Winter Storm which brings a higher than normal amount of precipitation would affect vast parts of the City however would most likely cause minimal amounts of damage.
- There have been Severe Winter Storms in the past. Prior events listed in this report will be from 2004 to present.

- Severe Winter Storms are impossible to predict, however with today's advances in meteorology, a warning of an impending storm may be possible.
- Severe Winter Storms will likely happen in the future and preparation should be made to lessen the impact of a Severe Winter Storm.

Prior Events

- January 2006, Winter Storm Roof Damage at fairgrounds.
- March 2006, Spring Storm
- January 2008, Winter Storm
    - January 3, 2008, Roof Damage at fairgrounds. $700 damage
    - January 3, 2008, Basement flooding at the El Dorado County DA's Office. $1000 damage
    - January 2008, Fence Damage to a private residence. $12,000 damage
    - January 3, 2008, Overtime costs to city $1,109

Terrorism

Terrorism is the fifth most dangerous hazard that is likely to occur within the City of Placerville.

- The City of Placerville's vulnerability to Terrorism may be found in Appendix B.

Prior Events

- A list of prior events may be found in Appendix B.

Earthquake:

An earthquake is the sixth most dangerous hazard that is likely to occur within the City of Placerville.

- The Melones Fault does run thru the city limits of Placerville.
    - The Melones Fault runs from the north to the south and goes directly under the El Dorado County Superior Court on Main Street.
- Per an article published in the Mountain Democrat January 19th, 1994, there have been 562 recorded earthquakes within a 62 mile radius of Placerville between 1850 and 1966.
- Per the same article the Melones Fault has not moved in 100,000 years and is not expected to move anytime soon.
- Earthquakes are impossible to predict, and since they can occur at any time they should be prepared for.

Prior Events

- There have been no major earthquakes within the City of Placerville since 2004.

Drought:

A drought is the seventh most dangerous hazard to occur within the City of Placerville.

- The City of Placerville does not have a major agricultural base within the City limits.
- The effects of a drought would be wide spread however would not cause injuries and damage would most likely be limited to landscaping.
- Droughts have occurred in the past and will likely occur in the future and should be prepared for by using native and drought resistant plants.
- Since a drought would not cause an excessive amount of damage no reconstruction costs have been estimated.

Prior Events

- There has been no significant drought history since 2000.

Land Subsidence:
Land Subsidence is the least most dangerous hazard likely to occur within the City of Placerville.

- The City of Placerville has an extensive history of mining activity.
- The City of Placerville has experienced land subsidence in the forms of mine cave-ins as well as minor land slides; however with the lack of documentation the exact number and dates are not possible.
- The areas most affected by mine cave-ins are those areas in which there was a heavy concentration of mining.
- The areas most affected by landslides are new construction areas and those areas with poor drainage.
- Land subsidence can be triggered by a multitude of factors and can be unpredictable.
- Areas of new construction and where there was mining activity should be prepared for the chance of a land subsidence.

Prior Events

- August 4, 2001 – Mine Cave-in at 830 De Bernardi Ct.
- March / April 2006 – Sink hole at 735 Spring Street. $2,650,000 damage

Conclusions on Hazard Risk

1. **Wildfires:** A wildfire is most likely to occur on an annual basis, the damage caused by a wildfire could be wide spread with a catastrophic potential impact to the residents and visitors to the City of Placerville.
2. **Flooding:** The City of Placerville does have listed 100 and 500 year flood planes, however it is estimated the damage caused by flooding would be confined to small areas of the City. A flood does have the potential to cause large amounts of property damage however there is a minimal risk to the residents and visitors.
3. **Disease Outbreak:** The City of Placerville is a tourist destination and has a large population of senior citizens. There is a low likelihood of a disease outbreak on

an annual basis; there would be minimal damage however a moderate number of people would be affected. There is a moderate risk to the residents and visitors.

4. **Severe Winter Storm:** The City of Placerville has suffered from Severe Winter Storms in the past. The affect from a Severe Winter Storm would be wide spread with a minimal risk to the residents and visitors.
5. **Terrorism:** There is an extremely low possibility of an act of terrorism to occur within the City of Placerville. The damage caused by an act of terrorism would likely be localized but would have a catastrophic impact on the residents and visitors to the City of Placerville.
6. **Earthquake:** The City of Placerville has an identified fault zone running underneath the City. A substantial amount of time has passed since the last earthquake, however it should be expected that a remote chance exists that the City of Placerville could experience an earthquake.
7. **Drought-** The City of Placerville does not have a significant agricultural community within the city limits. Therefore the affects of a drought would cause minimal risk to the residence and visitors to the City. The affects of a drought would have a greater affect on wildfires (fuel moisture) and domestic water usage (landscaping).
8. **Land Subsidence:** The City of Placerville has had instances of minor land subsidence, resulting from past mining activities. The damage caused from a land subsidence would be site specific and poses minimal risk to residents and visitors.

IV. Mitigation Considerations

Mitigation Capabilities Assessment

1. INTRODUCTION

This portion of the Hazard Mitigation Plan assesses the City of Placerville's current capabilities to mitigate the effects of natural hazards which were identified and analyzed in Section II (Hazard Identification and Analysis), and Section III (Community Vulnerability Assessment). The Mitigation Capabilities Assessment includes an examination of the following local government capabilities:

Staff & Organizational Capability
Technical Capability
Policy & Program Capability
Fiscal Capability
Political Willpower

The purpose of conducting the capabilities assessment is to identify potential hazard mitigation opportunities already available to the City of Placerville

2. STAFF & ORGANIZATIONAL CAPABILITY

The City of Placerville is governed by an elected five member City Council who bear the responsibility of serving the people and improving the quality of life in the City. The City has a number of professionally staffed departments to serve the residents and to carry out the day to day administrative activities. These are the different departments within the City:

Administration	**Community Development**	**Police Department**
Public Works / Engineer	**Fire Contract EDCFPD**	**Finance Department**
Community Services		

The **City Administrative Office** is responsible for the oversight and management of the City's budget and fiscal programs and coordination of City events and personnel.

The **Community Development Department**'s responsibilities include: developing and maintaining the City's General Plan and Housing Element; conducting public hearings on land use proposals; construction plan reviews; issuance of building permits; correcting Housing Code violations; nuisance abatement; and finally, to seek and obtain grant funding from numerous Federal and State agencies for community programs.

The **Police Department** is responsible for providing the City's general law enforcement services using sound police administrative practices within the guidelines of current law.

The **Public Works / Engineering Department** is responsible for Planning, Constructing, Operating, Maintaining, and expanding all of the City's Major Infrastructure. This includes streets, water and wastewater, storm drainage, and subdivisions. The department is divided into four operating divisions:

- Administration
- Engineering
- Corporation Yard
- Water Treatment Plant

The **Fire Contract EDCFPD** is responsible for providing the fire protection for the City of Placerville.

The **Finance Department** manages the entire City's financial and investment activities.

The **Community Services** is responsible for planning and carrying out recreational opportunities for all segments of the community. The Community Services are responsible for the maintenance, operation and development of parkland, open space, and all City facilities.

3. TECHNICAL CAPABILITY

Technical Expertise

The City of Placerville has a Community Development Department which has five full-time professionals with a combined experience of over 70 years. Those 5 positions are a Senior Building Inspector, a Community Development Director, an Associate Planner, a Community Development Specialist and an Administrative Secretary. The City also employees several Engineering Technicians and has tenured employees with the Public Works staff and Parks and Recreation.

Internet Access

City officials and employees have Internet access at different work stations in each Department. The City maintains a webpage that serves a variety of purposes.

4. FISCAL CAPABILITY

The City of Placerville has a limited fiscal capability due to the continued severe economic distress.

5. POLICY AND PROGRAM CAPABILITY

This part of the capabilities assessment includes the identification and evaluation of existing plans, policies, practices, programs, or activities that decrease the community's vulnerability to natural hazards. Activities that decrease hazard vulnerability should be

sustained and enhanced if possible. Activities that increase hazard vulnerability should be reconsidered and thoroughly addressed.

Emergency Operations Plan

The El Dorado County county-wide Emergency Operations Plan is the adopted Emergency Operations Plan for the City of Placerville. The City of Placerville shall maintain and has participated with development and update of the county-wide Emergency Operations Plan.

City of Placerville General Plan

The City of Placerville's General Plan states its goals in regards to the health and safety for the residents of the City. The City's Goals and Policies to accomplish those objectives are stated below.

Wildland and Urban Fires

Goal- To prevent loss of lives, injuries, and property damage due to wildland and urban fires.

Policies:

- Areas of high and extreme fire hazards shall be subject to special review, and building and higher intensity uses shall be limited unless the hazards are mitigated to a point acceptable by the Fire Department.
- All new development in areas of high and extreme fire hazards … shall be constructed with fire retardant roof coverings.
- The City shall require the installation of an approved interior sprinkler system in all new combustible wood frame commercial buildings of 5,000 square feet or more.
- All new development in areas of high and extreme fire hazards … shall provide for clearance around the structures and the use of fire-resistant groundcover.
- The City shall encourage the … Fire Department to maintain a regular program of fire inspection for commercial and industrial buildings.
- The City will ensure in approving and constructing new roads and streets that they are adequate in terms of width, turning radius, and grade to facilitate access by firefighting apparatus. All plans for new streets for areas within the Urban Service Area and/or sphere of influence of the City shall be reviewed by the … Fire Department to ensure that City standards are met since there is a high probability that these areas will be annexed to the City at some point in the future.
- All new development shall be required to meet the minimum fire flow rates and other standards specified by the City's Fire Code.
- Future roadway systems and networks shall be designed with at least one means of egress other than the access in all developing areas.
- The City shall not approve any medium or high density residential developments unless they are served by a street system with at least two streets capable of carrying peak load traffic.

- Parcel splits and multi-family developments shall not be allowed in areas served by narrow streets until minimum access can be guaranteed to emergency vehicles at all times.
- In approving commercial, industrial, and multi-family developments, the City shall ensure all structures are located within 150 feet of an access useable by fire trucks.
- Existing streets shall be upgraded to meet City Subdivision Ordinance standards wherever possible.
- Parking shall be restricted on streets less than 28 feet in width curb to curb
- The City shall continue to aggressively enforce its fire code and weed abatement regulations.
- The City shall encourage the Placerville Fire District to enact and enforce a weed abatement ordinance for the unincorporated area within the Fire District's service area.
- The City shall strive to restrict vehicular access and recreational use of undeveloped foothill areas during critical fire hazard periods.
- The City shall adopt a uniform system for numbering structures, residences, and businesses.
- The City shall remove obstructions obscuring street signs and require that house numbers be legible form the street. Commercial structures with rear street access shall be identified with the business name and street address in a clear and conspicuous manner on the rear of the building.

Flooding

Goal- To prevent loss of life, injury and property damage due to flooding.

Policies:

- The City shall continue to participate in the National Flood Insurance Program. To this end, the City shall ensure that local regulations are in full compliance with standards adopted by the Federal Emergency Management Agency.
- New residential development shall be constructed so that the lowest floor is at least one foot above the 100-year flood level.
- Non-residential development shall be anchored and flood-proofed to prevent damage form the 100-year flood, or alternatively, elevated to at least one foot above the 100-year flood level.
- Existing development shall comply with policies when improvements are made costing at least 50 percent of the current market value of the structure before the improvements.
- The City shall provide for channel improvements and tree and brush clearing along watercourses in Placerville to reduce flooding.

Geological Hazard

Goal- To prevent loss of lives, injury, and property damage due to geological hazards

Policies

- Lands with significant, identified geological hazards shall be designated for open-space and low intensity uses until it becomes feasible to mitigate the health and safety risks.
- The City shall require the following information and plans to be submitted for all projects subject to discretionary review by the City in areas of moderate or high slope instability and areas with identified soil instability problems.
    - Engineering geologic report.
    - Soils and foundation engineering report.
    - Grading, erosion, and sediment control plan.
    - Plan review letter evidencing review of all proposed development by a qualified engineering geologist.
    - As-built construction report, including building plans, explanation and discussion of any deviations from the approved grading plan, the location and results of field tests, results of laboratory tests, and a statement that the work was performed under the supervision of and in accordance with recommendations of the engineering geologist and/or soils engineer.
    - Signature of an engineering geologist certified by the State of California and/or a soils engineer registered in the State of California.
- The City shall ensure that both public and private developments in areas with significant identified geological hazards are sited to minimize the exposure of structures and improvements to damage resulting from geological hazards and to minimize the aggravation of off-site geological hazards.
- Development in areas of lava-capped underground streams shall be properly engineered to allow for the free flow of water.
- The suitability of soil and/or rock formations should be one of the prime considerations for determining the type and intensity of development permitted.
- The City shall establish an ongoing program to collect and maintain current geological data.
- The City shall retain on an ongoing basis a qualified consulting geologist to assist the City in updating its geological data and to review geological reports prepared in connection with new development projects.

Earthquake

Goal- To prevent loss of lives, injury, and property damage due to the collapse of buildings and critical facilities and to minimize disruption of essential services in the event of an earthquake.

Policies:

- The City shall, as required by State law, inventory all potentially hazardous buildings within the City and develop a mitigation program, including requirements for strengthening buildings, changing the use of the buildings to an acceptable occupancy level, or demolishing the building.
- The City should ensure that all public facilities, such as buildings, water tanks, and reservoirs, are structurally sound and able to withstand seismic shaking and the effect of seismically-induced ground failure.

- The City shall ensure that privately-owned and maintained above-ground petroleum products storage tanks and their retaining walls are structurally sound and able to withstand seismic shaking and the effects of seismically-induced ground failure.

Land Subsidence

Mine Shafts and Openings
Goal- To protect the public from the hazards posed by old mine shafts and openings.
Policy:

- The City shall enforce the Nuisance Abatement Ordinance requiring the identification and capping of all abandoned mine shafts and openings.

Hazardous Materials

Hazardous materials
Goal- To protect Placerville residents from the effects of hazardous materials.
Policy:

- City approvals of all new development shall consider the potential for the production, use, storage, and transport of hazardous materials and provide for reasonable controls on such hazardous materials.
- Within its authority, the City shall regulate the production, use, storage, and transport of hazardous materials to protect the health of Placerville residents.
- The City shall work with the County in implementing the County's Hazardous Materials Area Plan and acknowledges the County as lead agency for hazardous materials management and disclosure.
- The City shall work with the County in establishing an Annual Citizens' Hazardous Materials Clean-Up Day.

6. POLITICAL WILLPOWER

The City understands the need for mitigation efforts and is supportive within the financial means available to the City. Therefore it is expected that the current and future political climates are favorable for supporting and advancing future hazard mitigation strategies.

Mitigation Goals

It is not the design of this section to list the exact details of what corrective action should be taken, but to merely offer the basis to which the City should build upon to reduce the impact that a natural disaster will have upon the City.

1. Objectives

The City of Placerville should make every effort to implement and improve on the Hazard Mitigation Plan, as well as take the necessary steps to reduce or eliminate hazards that are posed by environmental factors.

The City should continue with and improve upon, the programs and polices that reduce the effects of naturally occurring disasters.

The City should reconsider and revise the programs and policies that increase the risk to the public in an effort to reduce those potential hazards.

The City's Hazard Mitigation Plan should be updated and revised when City Officials deem it to be necessary.

V. Implementation

A. PURPOSE

The purpose of this section is to outline the possible implementation methods of the proposed mitigation actions identified in the preceding section.

B. Mitigation Actions

1. Prevention

The City of Placerville should take all steps necessary in an effort to lessen the impact of a major natural disaster and man-made hazards prior to the occurrence of that natural disaster or man-made hazard. The preventive measures that are already in place that reduce the risk of a major disruption in critical services should continue to be practiced and from time to time be updated as the needs of the City and community change.

2. Property Protection

The City of Placerville should take into consideration and prepare for the impacts that a natural disaster or man-made hazard would have on both public and private property. The City should within its capabilities consider retrofitting critical facilities to help reduce the loss of that facility during a natural disaster or man-made hazard.

3. Natural Resource Protection

The City of Placerville should also take into consideration and prepare for the impacts that a natural disaster or man-made hazard will have on natural resources in the area. The City of Placerville is rich with natural resources which serve as the back drop for the community. To protect the natural beauty of the City will help spark the economic recovery from a natural disaster or man-made hazard. It should be a priority of the City to continue to improve and mitigate hazards in hazardous areas that are used for recreational purposes.

4. Structural Projects

The City of Placerville should continue in following the City General Plan goals for new and other structural projects. The City should from time to time revise and update its policies, procedures and practices when approving and having new and other structural projects implemented.

5. Emergency Services

The City of Placerville should continue to update and train new and tenured employees in respects to hazard reduction and enforcement of City Ordinances that directly affect hazard mitigation. The City should also plan and prepare for any unexpected costs that might occur during a natural disaster or man-made hazard for the response of emergency services.

6. Public Information and Awareness

The City of Placerville should work with local news organizations in an attempt to inform and keep the public aware of issues that affect both them as individuals as well as the community as a whole. The City should also create a network with local news organizations, business leaders and community leaders that has the ability to quickly pass along information.

The City of Placerville will have on their website a section for Hazard Mitigation. A customer feedback section will be provided to allow for continued public input.

C. EXISTING PROGRAMS

The City of Placerville currently has mitigation programs already in place. Those programs are listed in the General Plan and have goals and policies which are specific to geological hazards. Those goals and policies can be found in this Hazard Mitigation Plan under Section IV (Mitigation Considerations), subsection A (Mitigation Capabilities Assessment), number 5 (Policy & Program Capability).

These goals and policies will be continued to be used, reviewed, and updated, when necessary, on a regular basis as well as after any natural disaster that occurs.

D. LOCAL FUNDING SOURCES

The City of Placerville depends upon a variety of taxes and fees that support our general fund. These taxes and fees support a majority of the City's infrastructure. Current fiscal constraints have left the City with a very marginal surplus. The City uses grant funding, when available, to gap-fund necessary projects within the City.

The City cannot accomplish major projects without significant increases in revenue, whether it comes from taxes, fees or grants.

VI. Evaluation and Enhancement

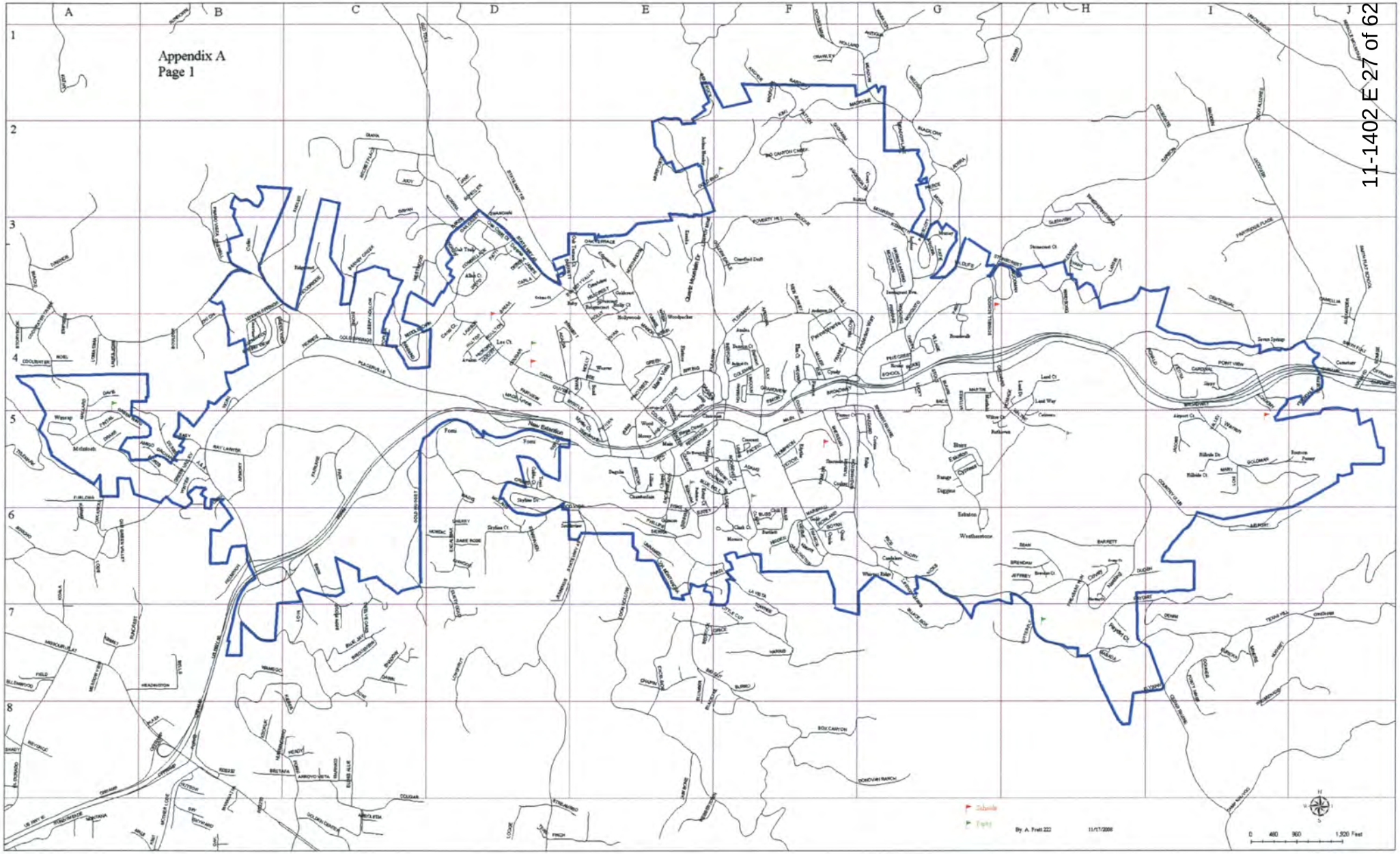
A. MONITORING, REPORTING, REVISIONS AND UPDATES

The City of Placerville has a unique topography that is ever changing. The needs of the community as well as the City to improve public safety changes with the times. Even though there is that constant change and upgrades in hazard mitigation, disasters happen. Those disasters do not usually occur at the most opportune times and are fairly unpredictable. The City of Placerville will take the opportunity to, after each disaster, take the lessons learned from a particular disaster, compare it to previous disasters of the like, and apply those lessons to this Hazard Mitigation Plan.

The City of Placerville has created relationships with allied agencies, including El Dorado County Sheriffs Office, which over-sees the Office of Emergency Services (OES) for El Dorado County. The El Dorado County Sheriff's OES division has 6 dedicated staff including one Sheriff Lieutenant, one Sheriff Sergeant, three Sheriff's Deputies and one department analyst. The City of Placerville works in partnership with the OES on the county Emergency Operations Plan, disasters and the hazard mitigation that goes along with those disasters.

The City of Placerville will also establish a set timetable to review and revise the Hazard Mitigation Plan to go along with the ever-changing needs of the community.

The City of Placerville will also continue to be involved with the public through our COPPS (Community Oriented Policing and Problem Solving) program, in which citizens may voice their concerns. The citizens of Placerville may also at anytime voice their concerns to the City regarding mitigation issues.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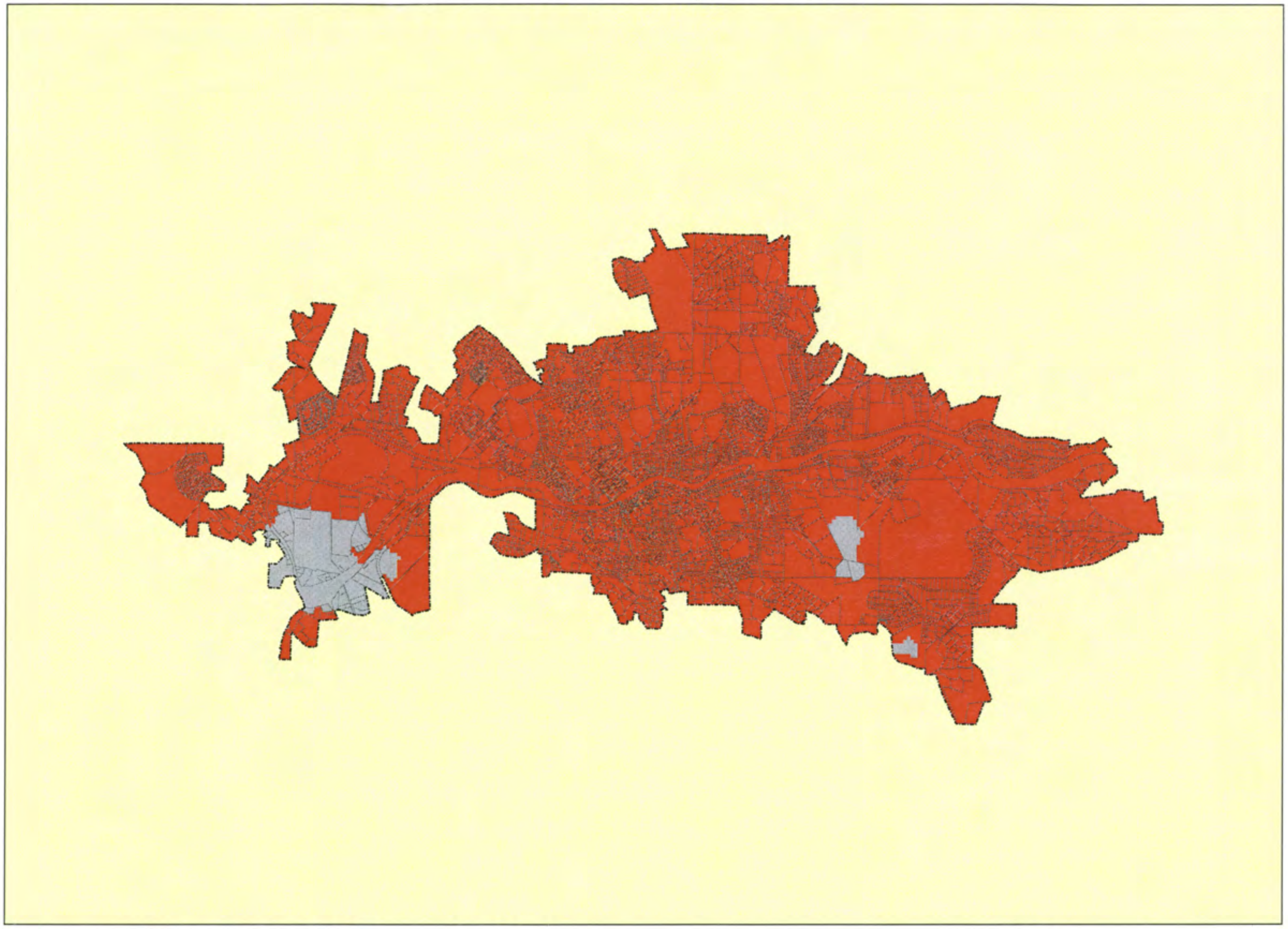
Placerville

Very High Fire Hazard Severity Zones in LRA

As Recommended By CAL FIRE



Fire Hazard Severity Zones

Local Responsibility Area: VHFHSZ, Non-VHFHSZ

State or Federal Responsibility Areas: VHFHSZ, Non-VHFHSZ

City Boundary

Parcels

County Boundary

This map was developed using data products such as parcel and city boundaries provided by local government agencies. In certain cases, this includes copyrighted geographic information. The maps are for display purposes only - questions and requests related to parcel or city boundary data should be directed to the appropriate local government entity.

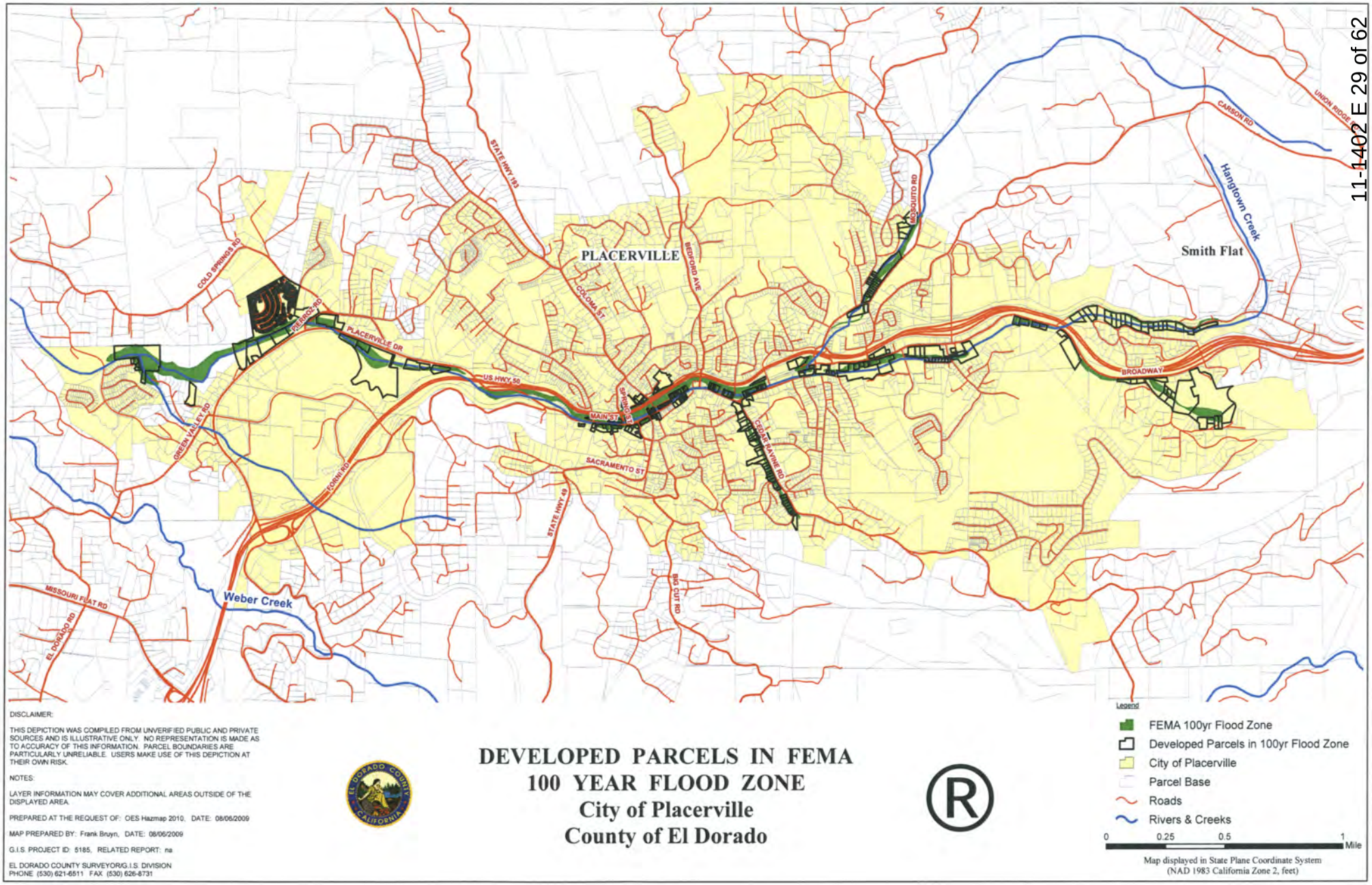
Projection Albers, NAD 1983
Scale 1: 12,000
at 36" x 36"
November 17, 2008

Obtain FRAP maps, data, metadata and publications on the Internet at http://frap.cdf.ca.gov
For more information, contact CAL FIRE-FRAP, PO Box 944246, Sacramento, CA 94244-2460, (916) 327-3939

Arnold Schwarzenegger, Governor,
State of California
Mike Chrisman, Secretary for Resources,
The Resources Agency
Ruben Grijalva, Director,
Department of Forestry and Fire Protection

MAP ID: FHSZL_c9_Placerville

DATA SOURCES
CAL FIRE Fire Hazard Severity Zones (FHSZL06_3)



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Appendix B

Terrorism

Terrorism is the fifth most dangerous hazard that is likely to occur within the City of Placerville.

- Several Critical facilities within the City of Placerville have been identified as being vulnerable to an act of Terrorism.
    - This list includes but is not limited to:
        - Placerville Police Department
        - Placerville City Hall
        - Placerville City Corporation Yard
        - Marshall Hospital
        - El Dorado Irrigation District Offices
        - City of Placerville Waster Water Treatment Plan
        - City of Placerville water storage
        - US Forest Service
        - US Postal Service
        - Caltrans yard
        - PG&E site
        - El Dorado County Superior Court
        - El Dorado County Sheriff's Office
        - El Dorado County Government Center
        - Suburban Propane
        - Amerigas
        - California Highway Patrol Office
- The City of Placerville is within close proximity to the US Forest Services Genetics lab.
- A detailed list of prior acts of terrorism prior to 2004 is not available.

Prior Events

- December 1, 2008 – Gasoline placed into crank case of equipment doing forest clearing

Appendix C

High Potential Loss Properties
Critical Facilities and Hazmat Sites

1) **Governmental Facilities**

A) City Hall, 3101 Center St.
$955,086 – 2004 assessed value

B) Public Works/Corporation Yard, 3231 Big Cut Rd.
No assessed value listed

C) Town Hall, 549 Main St.
No assessed value listed

D) US Post Office, 3045 Sacramento St.
$1,125,608 – 1992 assessed value

E) El Dorado County Fire Department Station 25, 3034 Sacramento St.
No assessed value listed

F) Placerville Police Department, 730 Main St.
No assessed value listed

G) El Dorado County Government Offices, 360 Fair Ln. 330 Fair Ln.
No assessed value listed

H) County Buildings, including Superior Court, 2850 Fairlane Ct.
No assessed value listed

I) Superior Court, 495 Main St.
No assessed value listed

J) District Attorneys Office, 515 Main St. and 520 Main St.
No assessed value listed

K) Fairgrounds, 100 Placerville Dr
No assessed value listed.

L) Animal Control, 511 Placerville Dr.
$167,101 – 2009 assessed value

M) Public Health, 931 Spring St.
No assessed value listed

N) Mental Health, 935 Spring St. and 670 Placerville Dr.
No assessed value listed

O) Library, 345 Fair Ln.
No assessed value listed

P) Juvenile Hall, 299 Fair Ln.
No assessed value listed

Q) County Jail, 300 Forni Rd.
No assessed value listed

R) Social Services, 3057 Briw Rd.
$3,162,068 – 2009 assessed value

S) Chamber of Commerce, 542 Main St.
No assessed value listed

T) El Dorado County Sheriffs Office, 300 Fair Ln.
No assessed value listed

U) CHP, 3031 LoHi Way.
No assessed value listed

V) USFS, 100 Forni Rd.
No assessed value listed

2) Schools & Day Care Facilities

A) El Dorado High School, 561 Canal St.
No assessed value listed

B) Sierra Elementary School, 1100 Thompson Way.
No assessed value listed

C) El Dorado Adventist School, 1900 Broadway Dr.
$2,067,239 – 2009 assessed value

D) Schnell Elementary, 2871 Schnell School Rd.
No assessed value listed

E) Markahm Middle School, 2800 Moulton Dr.
No assessed value listed

F) Happy Kids Day Care, 2786 Coloma St.
$117,405 – 2009 assessed value

G) Federated Church Preschool, 1031 Thompson Way.
$656.886 – 2009 assessed value

H) First Friends Preschool, 3132 Sheridan St.
$265,562 – 2009 assessed value

I) Montessori County Day School, 2771 Spear St.
$117,690 – 2009 assessed value

J) Montessori of Placerville, 2776 Ray Lawyer Dr.
No assessed value listed

K) A Tutoring Place, 2979 Coloma St.
No assessed value listed

L) Mother Lode Union District Office, 3783 Forni Rd.
No assessed value listed

M) Placerville Union Elementary School District, 1032 Thompson Way.
No assessed value listed

N) Creative Kids, 2869 Cold Springs Rd.
$409,990 – 2009 assessed value

O) Montessori Christian, 1139 Bush Ct.
$220,424 – 2009 assessed value

P) Placerville Union School Transportation, 2871 Schnell School Rd.
No assessed value listed

3) Apartment Complexes

A) Carson Ridge Apts, 2838 & 2848 Schnell School Rd.
$2,195,000 – 2009 assessed value

B) Cottonwood Sr. Apts, 2801 Clay St.
No assessed value listed

C) Cottonwood Apts, 3030 New Jersey, 2788 & 2766 Clay St.
No assessed value listed

D) Deerview Park Apts, 2880 Schnell School Rd.
$6,124,420 – 2009 assessed value

E) Placer Village Apts, 2789 Ray Lawyer Dr.
$5,311,985 – 2009 assessed value

F) Placerville Apts, 2684 Coloma Ct.
$2,560,437 – 2009 assessed value

G) Ridgecrest Apts, 2684 Woodridge Ct.
No assessed value listed

H) Ridgeview Manor, 2980 Coloma St.
$246,807 – 2009 assessed value

I) Sunrise Apts, 880 Conrad Ct.
$1,462,941 – 2009 assessed value

J) Sunrise Garden Apts, 1400 Woodman Cir.
$1,124,733 – 2009 assessed value

K) Tunnel St Senior Apts, 2880 Tunnel St.
$1,128,000 – 2009 assessed value

L) Woodridge East Apts, 2811 Cold Springs Rd.
$1,816,922 – 2009 assessed value

4) Senior Homes and Assisted Living

A) El Dorado Convalescent, 3280 Washington St.
$994,457 – 2009 assessed value

B) Placerville Pines, 1040 Marshall Way
$1,322,237 – 2009 assessed value

C) Sunshine Manor, 3112 Washington St.
$825,388 – 2009 assessed value

D) Sierra Manor, 863 De Bernardi Ct.
$220,972 – 2009 assessed value

**There are several other single family residences that house non-ambulatory residents. Snowline Hospice has a list of these residences.

5) Utilities / Services

A) Hunt & Sons Inc., 2891 Mosquito Rd.
$475,710 – 2009 assessed value

B) Sierra Energy, 561 Placerville Dr.
$318,213 – 2009 assessed value

C) Suburban Propane, 386 Placerville Dr.
$2,962,497 – 2009 assessed value

D) El Dorado Irrigation District, 2890 Mosquito Rd.
No assessed value listed

E) City Waste Water Treatment Plant, 2300 Coolwater Creek Rd.
No assessed value listed

F) City Water Treatment Plant, 3499 Pardi Wy.
No assessed value listed

G) Amerigas, 7485 Green Valley Rd.
$2,325,718 – 2009 assessed value

H) PG&E Station, 1284 Broadway Dr.
No assessed value listed

I) Marshall Hospital, 1080 Marshall Way
No Assessed Value

J) Marshall Hospital, 1065 Marshall Way
No Assessed Value

K) Marshall Hospital, 1100 Marshall Way
$456,008 – 2009 assessed value

M) Marshall Hospital Primary Care, 1095 Marshall Way
No Assessed Value

N) Marshall Hospital Clinic, 681 Main Street Ste. 102, 206
$1,694,637 – 2009 assessed value

O) Marshall Hospital Lab, 3105 Cedar Ravine Rd. Ste 201, 203
$1,264,982 – 2009 assessed value

P) Marshall Hospital Medical Office, 3180 Turner Street
$520,552 – 2009 assessed value

Q) Marshall Hospital Storage, 485 Pierroz Road
$1,114,267 – 2009 assessed value

R) Marshall Hospital Storage, 3152 Big Cut Road
$312,120 – 2009 assessed value

6) Commercial Complexes

A) Broadway Plaza, 1319 Broadway Dr.
$1,363,132 – 2009 assessed value

B) County Fair, 47 Fair Ln.
$1,997,340 – 2009 assessed value

C) Hangtown Village Square, 1200 Broadway Dr.
$1,317,679 – 2009 assessed value

D) Discovery Plaza, 2885 Ray Lawyer Dr.
$4,744,289 – 2009 assessed value

E) Venture Village, 2864 Ray Lawyer Dr.
$1,160,047 – 2009 assessed value

F) Carriage Trade Center, 1426-1480 Broadway Dr.
$3,489,241 – 2009 assessed value

Totals:

Section 1 (Governmental Facilities)	$5,409,863*
Section 2 (Schools and Day Care Facilities)	$3,855,196*
Section 3 (Apartment Complexes)	$21,971,245*
Section 4 (Senior Homes and Assisted Living)	$3,363,054
Section 5 (Utilities/Services)	$11,444,704*
Section 6 (Commercial Complexes)	$14,071,728
Grand Total	$60,115,790*

(*) Indicates an approximate value, not all properties listed under these sections had an assessed value.

Appendix D

El Dorado Irrigation District's Hazard Mitigation Plan

Due to the fact that the El Dorado Irrigation District's main offices are located within the City of Placerville and that the El Dorado Irrigation District supplies the City of Placerville with its water; the El Dorado Irrigation District's Hazard Mitigation Plan is included as an appendix to the City of Placerville Hazard Mitigation Plan.

See following pages.

Local Hazard Mitigation Plan

(2nd Edition, July 01, 2009)

Submitted by:

Mike Bristow
EID Safety/Security Officer

Local Hazard Mitigation Plan

(2nd Edition, July 01, 2009)

CHAPTER I--INTRODUCTION

A. BACKGROUND:

Public Law 106-390, known as the Disaster Mitigation Act of 2000, amended the Robert T. Stafford Disaster Relief and Emergency Services Act. This Act requires local government to have a Local Hazard Mitigation Plan (LHMP). The LHMP must be approved by the Federal Emergency Management Agency (FEMA), in order for the local government to be eligible to receive federal hazard mitigation project funding after that date.

As a Special District El Dorado Irrigation District (EID) has the option of filing a *stand alone* plan or promulgated as an *addendum* to El Dorado County's (EDC) Plan. As in 2005, EID staff has chosen to pursue the project as an addendum to the El Dorado County Plan. This revised edition, supersedes the June 20, 2005 Plan and continues to be an addendum to the County's Plan.

B. PURPOSE:

The EID LHMP is a planning tool for use by the District in its efforts to reduce future losses from natural and/or man-made hazards. Information within this Plan was compiled by our operational force, input from our affiliation with the County Disaster Council, the general public through publicized meetings, community involved strategic workshops, newsletters and customer service feedback. Moreover, some information within the Plan was developed through the use of contract personnel and firms specializing in vulnerable assessment programs to eliminate and mitigate potential hazards to District personnel, property, and public exposure.

C. HISTORY:

On October 30, 2000, the President signed into law the Disaster Mitigation Act of 2000 (DMA 2000). The purpose of DMA 2000 is to:

- Establish a national disaster mitigation program that will reduce loss of life and property, human suffering, economic disruption, and disaster assistance costs resulting from disasters, and
- Provide a source of pre-disaster hazard mitigation funding that will assist States and local governments in accomplishing that purpose.

DMA 2000 amends the Robert T. Stafford Disaster Relief and Assistance Act by, among other things, adding a new section, 322 – Mitigation Planning. This places emphasis on local mitigation planning. ***It requires local governments to prepare and adopt jurisdiction-wide hazard mitigation plans as a condition to receiving Hazard Mitigation Grant Program (HMGP) project grants/funding***. Local governments must review and if necessary, update the mitigation plan annually to continue program eligibility.

- ***Why develop a Mitigation Plan?***
  The full cost of the damage resulting from natural hazards – personal suffering, loss of lives, disruption of the economy, and loss of tax base – is difficult to measure. Our county is subject to many types of natural hazards: floods, winter storms, landslides, avalanches, earthquakes, biological/health emergencies (pandemic), drought/extreme heat, and wildfires, all of which can have significant economic and social impacts. Some, such as winter storms are seasonal and strike in predictable locations. Others, such as wildfires can occur anytime of the year and almost anywhere in the County.

D. SCOPE OF PLAN:

The initial EID LHMP Committee developed the contents of this plan by using the Hazard Mitigation Planning Guide from the Office of Emergency Services. The historical overview included the following steps:

Step 1 – Form a Committee and Set Hazard Mitigation Goals (June 2004)

The EID Local Hazard Mitigation Committee includes key staff from Health and Safety, Environmental, Water, and Hydro departments.

Step 2 – Identify Hazards (August 2004)

The EID Local Hazard Mitigation committee identified natural hazards which have been known to occur within EID's geographical range.

Step 3 – Identify Critical Facilities (August 2004)

Step 4 – Identify Existing Mitigation Strategies (September 2004)

Step 5 – Identify the Gaps in Existing Mitigation Strategies (on-going)

Step 6 – Identify Potential Mitigation Strategies (on-going)

Step 7 – Prioritize and Develop the Action Plan (November/December 2004)

Step 8 – Prioritizing Actions (January 2005)

Step 9 – Develop Implementation Strategy (February 2005)

Step 10 – Plan submittal to EDC (February 2005)

CHAPTER II--DISTRICT PROFILE

A. INTRODUCTION

EID is an *irrigation special district* organized in 1925 under the Irrigation District Act (Water Code §§20500, et seq.) and authorizing statutes (Water Code §§22975, et seq.). Its original purpose was to provide domestic water to the City of Placerville and irrigation water to local farmers. Under existing law, this agency provides water, wastewater, recycled water, hydroelectric, and recreation services within its service area, located in the western slope of the Sierra Nevada Mountains in the County of El Dorado, and serves approximately 100,000 customers. EID is an essential support element for fire fighting and it is imperative that our system remains fully operational at all times. Moreover, the U.S. Forest Service has identified 18 communities within El Dorado County that are at greatest risk for disaster level fire storms and we provide the key points of water for fighting and mitigating these wild land fires.

EID owns and operates a 21 megawatt hydroelectric electric generation project licensed by the Federal Energy Regulatory Commission (FERC Project 184) which consists of 4 reservoirs (Echo Lake, Lake Aloha, Caples Lake, and Silver Lake), dams, and approximately 23 miles of flumes, canals, siphons, and tunnels located through the Sierra Nevada Mountains east of Placerville in the Counties of El Dorado, Alpine, and Amador. It is imperative to safe guard and mitigate damage to all dams, reservoirs, and water conveyance systems because a failure could result in significant danger to those persons that reside, work, or play downstream.

Location: The District lies midway between the cities of Sacramento and South Lake Tahoe along the Highway 50 corridor. It is bounded by Sacramento County on the west and the town of Strawberry on the east. The community of El Dorado Hills is the west-most community served by the contiguous water system and Pollock Pines is the east-most. The area north of Coloma and Lotus establishes the northern-most service area. The largely agrarian communities of Pleasant Valley and South Shingle Springs anchor the southern-most service area. The City of Placerville is located in the central part of the District and receives water from the District on a wholesale basis. The District is spread over 226 square miles and is intermixed with low lying savanna topography of rolling hills and ultimately to high Alpine altitudes. See Attachment "A" Map

B. PAST DEVELOPMENT TRENDS

The original water system was a ditch conveyance system. Following many years of effort on the part of early Boards and committed staff to develop additional water supplies, the United States Bureau of Reclamation (USBR) authorized the Sly Park Unit under the American River Act of October 14, 1949 to augment the original water delivery system. The Sly Park Unit included the construction of Sly Park Dam and Reservoir, Camp Creek Diversion Dam and Tunnel, and conduits and canals used to convey, treat, and store water delivered from Sly Park's Jenkinson Lake. The project was completed in 1955, as a non-contiguous part of the Central Valley Project. The Sly Park Unit operated under contract by EID from 1955 until the District purchased the Sly Park Unit from the USBR on December 23, 2003.

The District's other main source of supply is at Folsom Reservoir. The District currently has two USBR water service contracts totaling 7,550 acre-feet and is working on a new 7,500 acre-feet

USBR contract for use in 2005. Additionally, the District was awarded a new water right for 17,000 acre-feet for diversion at Folsom Reservoir by the State Water Resources Control Board.

C. CURRENT DEVELOPMENT TRENDS

Today, the District provides municipal and industrial water (both retail and wholesale), irrigation water, wastewater treatment and re-cycled water, recreation, and hydroelectric services. As such, EID is one of the few California districts that provide the full complement of water-related services in the historical California Gold Rush area. Included in the District are the communities of Cameron Park, Camino, Diamond Springs, El Dorado, El Dorado Hills, Placerville, Pollock Pines, Shingle Springs, Rescue, and many smaller communities.

System Description: The District's contiguous service area spans 226 square miles and ranges from 500 feet at the Sacramento County line to over 8100 feet in elevation in the eastern part of the District. The system requires 181 pressure-regulating zones to operate reliably. The water system operates over 1,150 miles of pipe, 40 miles of ditches, 6 treatment plants, 33 storage reservoirs and 21 pumping stations. In addition, the wastewater system operates 58 lift stations, 300 miles of pipe, and 5 treatment facilities. The El Dorado Hills and the Deer Creek wastewater treatment facilities now produce Title 22 recycled water which is used at golf courses and on front and back yard landscapes in single family homes within selected communities within the District. EID's recycled water program is entering its third decade, and is considered a leader in the recycled water industry in California.

The District also owns and operates Sly Park Recreation Area at its main reservoir, Jenkinson Lake. Located in a heavily wooded area, it is popular for both day visits and overnight camping. The park includes 600 surface acres for water activities, 10 picnic areas, 9 miles of shoreline, 2 boat ramps, Boy Scout Hill, and 191 individual campsites along the north shore. There are 5 Group camping areas, an Event Center, and equestrian campground along the south shore. There are also 9 miles of hiking and equestrian trails, and a Native American/historical museum that includes a self-guided, 1/2-mile trail for those who enjoy nature and wildlife viewing.

Other Considerations: EID also maintains operations that are located in Amador and Alpine Counties. These include Caples Lake (Alpine), Silverlake (Amador), and Kay's Resort (Amador; currently closed). Work is on-going to coordinate LHMPs with these entities.

CHAPTER III--HAZARD RISK ASSESSMENT

A. WHAT ARE THE HAZARDS?

El Dorado County is prone to a variety of natural hazards. In no particular order, these include: flooding, high winds, wildland fires, drought, landslide, avalanche, and severe winter storms. The following list of natural and manmade disasters (and the areas affected by them), either have or could affect future EID operations.

B. DEFINITIONS OF HAZARDS

Flooding: Floods are defined as a temporary overflow of water onto lands that are not normally covered by water. Flooding results from the overflow of major rivers and tributaries, storm surges, and/or inadequate local drainage. Floods can cause loss of life property damage, water supply contamination, and loss of power generation. Floods can also disrupt travel routes on roads and bridges.

Inland floods are most likely to occur in the spring due to the increase in rainfall and melting of snow; however, floods can occur at any time of the year. A sudden thaw in the winter or a major downpour in the summer can cause flooding. This was seen in 1996 when the region was hit by the *Pineapple Express*. This is a warm weather storm system from the southern Pacific Ocean. The storm disburses large amounts of rain in short time period. During the winter months this warm rain also causes rapid melting of snow.

- *Disaster Event:* During late 1996 EID experienced a series of strong storms that produced heavy snowfall that extended to lower elevations. Immediately following these colder storms, a wave of sub-tropical (warmer) storms (*Pineapple Express)* struck the area causing accelerated snow melt. The combination resulted in an unprecedented amount of runoff water that inundated streams, lakes and rivers. Reservoirs quickly went to capacity requiring the purposeful release of water downstream. The combination resulted in the flooding of various areas that damaged structures, water conveyance systems, diversion dams, created water contamination, and roadways. The monetary damage amount for this one incident was over $30 million and resulted in a "Presidential Declared Disaster" area.

High Winds: Significantly high winds occur especially during winter storms and thunderstorms. Falling objects and downed power lines are dangerous risks associated with high winds. In addition, property damage and downed trees are common during high wind occurrences. The risk of "downed" power lines have often resulted in significant wild land fires.

Severe Thunderstorms: All thunderstorms contain lightning. During a lightning discharge, the sudden heating of the air causes it to expand rapidly. After the discharge, the air contracts quickly as it cools back to ambient temperatures. This rapid expansion and contraction of the air causes a shock wave that we hear as thunder, a shock wave that can damage building walls and break glass.

- *Lightning:* A giant spark of electricity that occurs within the atmosphere or between the atmosphere and the ground. As lightning passes through air, it heats the air to a temperature of about 50,000 degrees Fahrenheit, considerably hotter than the surface of the Sun. Lightning strikes can cause death, injury, property damage, and wildfires.

Wildland fires*:* A forest fire is an uncontrolled fire in a woody area. They often occur during drought and when woody debris on the forest floor is readily available to fuel the fire. Grass fires are uncontrolled fires in grassy areas.

The District's facilities and infrastructure are located within and are adjacent to Federal Lands that have been described by the U.S. Forest Service as being heavily fueled and have the potential for a disaster level fire storm event. The U.S. Forest Service has identified 18 local communities that are at greatest risk for such an event and EID provides water and sewage services to them. Our facilities, infrastructure and personnel are also at risk due to the fire load and terrain setting. A wildfire storm has the potential of destroying power facilities, water delivery & storage, create water contamination, environmental damage and cause potential injury and death to staff. The El Dorado County Fire Safe Council in conjunction with the USFS, California Department of Forestry and local fire districts have assembled a fire vulnerably and mitigate plan for the County and it is included in the El Dorado County Hazard Mitigation Plan. EID has, or is developing, Fire Emergency Response Plans for each of our facilities. It is the intent of this Mitigation Plan, in conjunction with El Dorado County Fire Safe Council's Mitigation Plan to address EID's vulnerabilities and mitigation efforts.

Ice & Snow Events*:* Ice and snow events typically occur during the winter months and can cause loss of life, property damage, environmental damage and tree damage.

- *Heavy Snow Storms*: A winter storm can range from moderate snow to blizzard conditions. Blizzard conditions are considered blinding wind-driven snow over 35 mph that lasts several days. A severe winter storm deposits four or more inches of snow during a 12-hour period or six inches of snow during a 24-hour period.
- *Ice Storms*: An ice storm involves rain, which freezes upon impact. Ice coating at least one-fourth inch in thickness is heavy enough to damage trees, overhead wires and similar objects. Ice storms also often produce widespread power outages.

Landslides: EID has facilities and water conveyance systems that have been identified as being in geologically active zones. One such zone is located in the American River Canyon straddling Highway 50 running east from Icehouse Road to Strawberry. The State of California CALTRANS geologists conducted a study of the area and identified "600" potential landslide areas. In 1997, and as a result of strong storms, two very large landslides occurred in this area and damaged and incapacitated the system and blocked Highway 50 for 60-days.

- *Disaster Event*: In October 2004 a wild land fire started in this area burning 7700 acres of land increasing the potential for debris flows and landslide activity. This added risk increases our vulnerability for substantial damage to facilities and operational systems.

Avalanches: An avalanche is a fall or slide of a large mass of snow, rock, or other material down a mountainside. The prevalent exposure would be in the higher country side and could impact the EID personnel, water conveyance systems and roadways. Heavy snow and rock fall activity has interrupted operations three times during 2004 alone. Flume and canals become inundated with debris. A massive avalanche could potentially damage and interrupt service for extended periods of time.

Earthquakes: Geologic events are often associated with California there are several active and inactive faults within El Dorado County.

- *Earthquakes:* A rapid shaking of the earth caused by the breaking and shifting of rock beneath the earth's surface. Earthquakes can cause buildings and bridges to collapse, disrupt gas, electric, phone service, water, recycled water, sewer lines, and often cause landslides, flash floods, fires, and avalanches. Larger earthquakes usually begin with slight tremors but rapidly take the form of one or more violent shocks, and end in vibrations of gradually diminishing force called aftershocks. The underground point of origin of an earthquake is called its focus; the point on the surface directly above the focus is the epicenter. The magnitude and intensity of an earthquake is determined by the use of scales such as the Richter scale.

- Earthquake and shake maps are being obtained from the U.S. Geologic Service and the California Office of Emergency Services, and will be addressed in the next upgrade of the El Dorado County Hazard Mitigation Plan.

- The University of Reno is actively researching the potential threat of a level 6 or 7 earthquake in the Tahoe basin area. More information is available at the university's website (http://www.seismo.unr.edu/htdocs/WGB/LakeTahoeTsunami/). We will be reviewing this information further and the potential threat to EID operations and its customers.

Drought: A drought is defined as a long period of abnormally low precipitation, especially one that adversely affects growing or living conditions. The effect of drought is indicated through measurements of soil moisture, groundwater levels and streamflow. However, not all of these indicators will be minimal during a drought. For example, frequent minor rainstorms can replenish the soil moisture without raising groundwater or surface water storage. Low streamflow, groundwater, and surface water storage levels commonly cause diminished water supply.

The El Dorado County has been declared by the U.S. Agricultural Secretary as a drought disaster area. Extended drought periods can result in tremendous economic losses and ultimately our ability to provide vital services to the communities we serve.

We have recognized this serious potential problem and have taken initial steps to mitigate losses by enclosing "open" reservoirs and water conveyance systems.

Pandemic (Health Emergency): A pandemic is a global disease outbreak which could affect local District operations.

A flu pandemic occurs when a new influenza virus emerges for which people have little or no immunity and for which there is no vaccine. The disease spreads easily person-to-person, can cause serious illness, and can sweep across the country and around the world in very short time. The impact to our operations, staff personnel and their families, local residents, and the public, must be strongly considered and planned for.

C. SUMMARY OF VALUES

EID has conducted an assessment of the many Natural Hazards previously listed that could impact operations, and works closely with its insurance carrier loss control representatives in maintaining current values for structures, equipment and contents. These assessments are conducted annually.

Insured replacement cost values for structures and contents as of July 1, 2009 are as follows:

Schedule of Locations

Premises	Item	Address	Occupancy	City	State	Zip
1	1	Area Around 2890 Mosquito Road	Alarms	Placerville	CA	95667
1	1	2890 Mosquito Road	Dunlop Customer Serv	Placerville	CA	95667
1	2	Area Around 2890 Mosquito Road	Bridges	Placerville	CA	95667
1	2	2890 Mosquito Road	Auto & Weld Shop Bui	Placerville	CA	95667
1	3	Area Around 2890 Mosquito Road	Canal Residences & W	Placerville	CA	95667
1	3	2890 Mosquito Road	Warehouse	Placerville	CA	95667
1	4	Area Around 2890 Mosquito Road	Communication Lines	Placerville	CA	95667
1	5	Area Around 2890 Mosquito Road	Covered Sections & B	Placerville	CA	95667
1	6	Area Around 2890 Mosquito Road	Diversion Dams & Str	Placerville	CA	95667
1	7	Area Around 2890 Mosquito Road	Deer Escapes	Placerville	CA	95667
1	8	Area Around 2890 Mosquito Road	Equipment Ramps	Placerville	CA	95667
1	9	Area Around 2890 Mosquito Road	Fences	Placerville	CA	95667
1	10	Area Around 2890 Mosquito Road	Flumes	Placerville	CA	95667
1	11	Area Around 2890 Mosquito Road	flow Monitoring Gage	Placerville	CA	95667
1	12	Area Around 2890 Mosquito Road	Generators	Placerville	CA	95667
1	13	Area Around 2890 Mosquito Road	Canal Equipment and	Placerville	CA	95667
1	14	Area Around 2890 Mosquito Road	Retaining Wall	Placerville	CA	95667
1	15	Area Around 2890 Mosquito Road	Panel Boards	Placerville	CA	95667
1	16	Area Around 2890 Mosquito Road	Pipelines	Placerville	CA	95667
1	17	Area Around 2890 Mosquito Road	Propane Tanks	Placerville	CA	95667
1	18	Area Around 2890 Mosquito Road	Rock Wall	Placerville	CA	95667
1	19	Area Around 2890 Mosquito Road	Siphons	Placerville	CA	95667
1	20	Area Around 2890 Mosquito Road	Spillways - Civil Sr	Placerville	CA	95667
1	21	Area Around 2890 Mosquito Road	Spillways - Cross Ga	Placerville	CA	95667
1	22	Area Around 2890 Mosquito Road	Spillways - Manual S	Placerville	CA	95667
1	23	Area Around 2890 Mosquito Road	Remoted Controlled S	Placerville	CA	95667
1	24	Area Around 2890 Mosquito Road	Canal Transitions	Placerville	CA	95667
1	25	Area Around 2890 Mosquito Road	Office	Placerville	CA	95667

1	26	Area Around 2890 Mosquito Road	Penstock & Surge Tank	Placerville	CA	95667
1	27	Area Around 2890 Mosquito Road	Powerhouse Building	Placerville	CA	95667
1	28	Area Around 2890 Mosquito Road	Equipment in Powerho	Placerville	CA	95667
1	29	Area Around 2890 Mosquito Road	Generator and Equipm	Placerville	CA	95667
2	1	4625 Latrobe Road	Lab & Master Control	El Dorado Hills	CA	95762
2	2	4625 Latrobe Road	Algae-Dissolved Air	El Dorado Hills	CA	95762
2	3	4625 Latrobe Road	Digestor Building	El Dorado Hills	CA	95762
2	4	4625 Latrobe Road	Algae-Waste Activate	El Dorado Hills	CA	95762
2	5	4625 Latrobe Road	Maintenance Building	El Dorado Hills	CA	95762
2	6	4625 Latrobe Road	Storage Building	El Dorado Hills	CA	95762
2	7	4625 Latrobe Road	Blower Building	El Dorado Hills	CA	95762
2	8	4625 Latrobe Road	Three 200 HP Electri	El Dorado Hills	CA	95762
2	9	4625 Latrobe Road	Boiler	El Dorado Hills	CA	95762
2	10	4625 Latrobe Road	200 HP Flow-way Vert	El Dorado Hills	CA	95762
3	1	1835 Francisco Drive	Control Building	El Dorado Hills	CA	95630
3	2	1835 Francisco Drive	500 HP Pump & Motor	El Dorado Hills	CA	95630
3	3	1835 Francisco Drive	500 HP Pump & Motor	El Dorado Hills	CA	95630
3	4	1835 Francisco Drive	Equipment Building	El Dorado Hills	CA	95630
3	5	1835 Francisco Drive	Emergency Chlorine S	El Dorado Hills	CA	95630
3	6	1835 Francisco Drive	125 HP Pump & Motor	El Dorado Hills	CA	95630
3	7	1835 Francisco Drive	150 HP Pump & Motor	El Dorado Hills	CA	95630
3	8	1835 Francisco Drive	300 HP Pump & Motor	El Dorado Hills	CA	95630
3	9	1835 Francisco Drive	200 HP Pump & Motor	El Dorado Hills	CA	95630
3	10	1835 Francisco Drive	100 HP Pump & Motor	El Dorado Hills	CA	95630
3	11	1835 Francisco Drive	Soda Ash Storage Tan	El Dorado Hills	CA	95630
3	12	1835 Francisco Drive	Power Activated Carb	El Dorado Hills	CA	95630
4	1	Folsom Lake	Pump Station	El Dorado Hills	CA	95762
4	2	Folsom Lake	Pump Equipment	El Dorado Hills	CA	95762
5	1	Oak Ridge	Pump Station	El Dorado Hills	CA	95762
5	2	Oak Ridge	Pump Equipment	El Dorado Hills	CA	95762
6	1	1565 Deer Creek road	Office	Cameron Park	CA	95682
6	2	1565 Deer Creek road	Warehouse	Cameron Park	CA	95682
6	3	1565 Deer Creek road	Belt Press Building	Cameron Park	CA	95682
6	4	1565 Deer Creek road	Belt Press Building	Cameron Park	CA	95682
6	5	1565 Deer Creek road	Thickener Control Bu	Cameron Park	CA	95682
6	6	1565 Deer Creek road	Thickener Control Bu	Cameron Park	CA	95682
6	7	1565 Deer Creek road	Lower Blower/Main El	Cameron Park	CA	95682
6	8	1565 Deer Creek road	Lower Blower/Main El	Cameron Park	CA	95682
6	9	1565 Deer Creek road	Reclaimed Water Cont	Cameron Park	CA	95682
6	10	1565 Deer Creek road	Reclaimed Water Cont	Cameron Park	CA	95682
6	11	1565 Deer Creek road	Effluent Building	Cameron Park	CA	95682
6	12	1565 Deer Creek road	Effluent Building Eq	Cameron Park	CA	95682
6	13	1565 Deer Creek road	3 Hoffman Air Blower	Cameron Park	CA	95682
6	14	1565 Deer Creek road	1-100 HPElec Motor/P	Cameron Park	CA	95682
6	15	1565 Deer Creek road	Reclaimed Water Filt	Cameron Park	CA	95682
7	1	3240 Bass Lake Road	Office & Shop Buildi	El Dorado Hills	CA	95762
7	2	3240 Bass Lake Road	Pumphouse	El Dorado Hills	CA	95762
7	3	3240 Bass Lake Road	Pump Equipment	El Dorado Hills	CA	95762
8	1	5588 Sly Park Road	Chlorine & Chemical	Pollock Pines	CA	95726
8	2	5588 Sly Park Road	Control & Filter Bui	Pollock Pines	CA	95726
8	3	5588 Sly Park Road	Control & Filter Bui	Pollock Pines	CA	95726
8	4	5588 Sly Park Road	Raw Water Pump Build	Pollock Pines	CA	95726
8	5	5588 Sly Park Road	Pump Equipment	Pollock Pines	CA	95726
8	6	5588 Sly Park Road	Pumphouse	Pollock Pines	CA	95726

8	7	5588 Sly Park Road	Pump Equipment	Polluck Pines	CA	95726
9	1	Gilmore Road	Control & Chlorine B	Pollock Pines	CA	95726
9	2	Gilmore Road	Control & Chlorine B	Pollock Pines	CA	95726
9	3	Gilmore Road	Stge Tank, Feed Syst	Pollock Pines	CA	95726
10	1	4771 Sly Park Road	Office	Pollock Pines	CA	95726
10	2	4771 Sly Park Road	Maintenance Building	Pollock Pines	CA	95726
10	3	4771 Sly Park Road	Conference Center Bu	Pollock Pines	CA	95726
10	4	4771 Sly Park Road	Conference Center Bu	Pollock Pines	CA	95726
10	5	4771 Sly Park Road	Conference Center, W	Pollock Pines	CA	95726
10	6	4771 Sly Park Road	Boat Docks	Pollock Pines	CA	95726
11	1	Outingdale WTP	Water Treatment Plan	Placerville	CA	95667
11	2	Outingdale WTP	Treatment Plant Equi	Placerville	CA	95667
12	1	Strawberry WTP	Water Treatment Plan	Placerville	CA	95667
12	2	Strawberry WTP	Treatment Plant Equi	Placerville	CA	95667
15	1	Reservoir 7 WTP	Lime Feeder & Chemic	Placerville	CA	95667
16	1	Shingle Springs Booster Stn	Pumphouse	Shingle Springs	CA	95682
16	2	Shingle Springs Booster Stn	Generator at Booster	Shingle Springs	CA	95682
17	1	Sportsman Hall Pump Station	Pumphouse	Pullock Pines	CA	95726
17	2	Sportsman Hall Pump Station	Pump Equipment	Pullock Pines	CA	95726
17	3	Sportsman Hall Pump Station	Motor	Pullock Pines	CA	95726
18	1	Sanitation District 2	Generator	Placerville	CA	95667
19	1	El Dorado Hills Ridge View Stn	110KW Emergency Powe	El Dorado Hills	CA	95762
20	1	Francisco Blvd	75KW Emergency Power	El Dorado Hills	CA	95762
21	1	Business Park	100KW Emergency Powe	Placerville	CA	95667
21	2	Business Park	100 KW Emergency Pow	Placerville	CA	95667
21	3	Business Park	100 KW Emergency Pow	Placerville	CA	95667
22	1	Office of Education	75 KW Emergency Powe	Placerville	CA	95567
23	1	Indian Creek	75KW Emergency Power	Placerville	CA	95667
24	1	Deer Park	75 KW Emergency Powe	Diamond Springs	CA	95619
25	1	Herbert Green	100 KW Emergency Pow	Placervilee	CA	95667
26	1	New York Creek	200 KW Emergency Pow	El Dorado Hills	CA	95762
27	1	Shingle Springs	100 KW Emergency Pow	Shingle Springs	CA	95682
28	1	Marina Village	100 KW Emergency Pow	El Dorado Hills	CA	95762
29	1	Crown Village	200 KW Emergency Pow	El Dorado Hills	CA	95762
30	1	St. Andrews	200 KW Emergency Pow	El Dorado Hills	CA	95672
31	1	Summit 1	75 KW Emergency Powe	Placerville	CA	95667
32	1	Summit 3	75 KW Emergency Powe	Placerville	CA	95667
33	1	Waterford 7	75 KW Emergency Powe	Placerville	CA	95667
34	1	Bridlewood	100 KW Emergency Pow	El Dorado Hills	CA	95762
35	1	Timberline	110 KW Emergency Pow	El Dorado Hills	CA	95762
36	1	South Pointe	125 KW Emergency Pow	Diamond Springs	CA	95782

Schedule of Limits

Coverages A and B:

Premises	Item	Const.	Prot.	Real Property	Personal Property	Deductible	Include in Blanket
1	1	1	09	$375,000	Not Covered	$25,000	
1	1	4	06	$9,000,000	$1,500,000	$25,000	
1	2	1	09	$650,000	Not Covered	$25,000	
1	2	4	06	$430,198	$150,000	$25,000	
1	3	4	09	$375,000	Not Covered	$25,000	
1	3	4	06	$122,820	$200,000	$25,000	

1	4	1	09	$138,000	Not Covered	$25,000
1	5	4	09	$1,905,000	Not Covered	$25,000
1	6	4	09	$3,500,000	Not Covered	$25,000
1	7	4	09	$70,000	Not Covered	$25,000
1	8	4	09	$110,000	Not Covered	$25,000
1	9	1	09	$300,000	Not Covered	$25,000
1	10	4	09	$32,500,000	Not Covered	$25,000
1	11	1	09	$60,000	Not Covered	$25,000
1	12	1	09	$60,000	Not Covered	$25,000
1	13	1	09	$190,000	Not Covered	$25,000
1	14	1	09	$920,000	Not Covered	$25,000
1	15	1	09	$405,000	Not Covered	$25,000
1	16	8	09	$750,000	Not Covered	$25,000
1	17	1	09	$13,000	Not Covered	$25,000
1	18	1	09	$263,000	Not Covered	$25,000
1	19	4	09	$6,558,000	Not Covered	$25,000
1	20	4	09	$2,050,000	Not Covered	$25,000
1	21	4	09	$340,000	Not Covered	$25,000
1	22	4	09	$24,000	Not Covered	$25,000
1	23	4	09	$3,300,000	Not Covered	$25,000
1	24	4	09	$88,000	Not Covered	$25,000
1	25	4	09	$500,000	Not Covered	$25,000
1	26	4	09	$23,981,000	Not Covered	$25,000
1	27	4	09	$1,000,000	Not Covered	$25,000
1	28	1	09	$1,000,000	Not Covered	$25,000
1	29	1	09	$15,000,000	Not Covered	$25,000
2	1	4	03	$335,456	$150,000	$25,000
2	2	4	03	$174,633	$100,000	$25,000
2	3	4	03	$157,240	$125,000	$25,000
2	4	4	03	$683,000	$100,000	$25,000
2	5	4	03	$152,480	$10,000	$25,000
2	6	4	03	$137,242	$25,000	$25,000
2	7	4	03	$167,237	$250,000	$25,000
2	8	1	09	$250,000	Not Covered	$25,000
2	9	1	09	$200,000	Not Covered	$25,000
2	10	1	09	$250,000	Not Covered	$25,000
3	1	4	03	$393,491	Not Covered	$25,000
3	2	1	09	$300,000	Not Covered	$25,000
3	3	1	09	$300,000	Not Covered	$25,000
3	4	4	04	$476,500	$25,000	$25,000
3	5	1	09	$100,000	Not Covered	$25,000
3	6	1	09	$100,000	Not Covered	$25,000
3	7	1	09	$125,000	Not Covered	$25,000
3	8	1	09	$150,000	Not Covered	$25,000
3	9	1	09	$140,000	Not Covered	$25,000
3	10	1	09	$100,000	Not Covered	$25,000
3	11	8	03	$220,000	Not Covered	$25,000
3	12	8	03	$220,000	Not Covered	$25,000
4	1	4	03	$1,040,600	Not Covered	$25,000
4	2	1	09	$100,000	Not Covered	$25,000
5	1	4	03	$142,950	Not Covered	$25,000
5	2	1	09	$25,000	Not Covered	$25,000
6	1	1	05	$157,240	$250,000	$25,000
6	2	1	05	$169,141	$10,000	$25,000

6	3	1	05	$279,992	Not Covered	$25,000
6	4	1	09	$600,000	Not Covered	$25,000
6	5	4	05	$150,000	Not Covered	$25,000
6	6	1	09	$200,000	Not Covered	$25,000
6	7	1	09	$40,000	Not Covered	$25,000
6	8	1	09	$200,000	Not Covered	$25,000
6	9	1	05	$50,000	Not Covered	$25,000
6	10	1	09	$139,500	Not Covered	$25,000
6	11	1	05	$50,000	Not Covered	$25,000
6	12	1	09	$200,000	Not Covered	$25,000
6	13	1	09	$200,000	Not Covered	$25,000
6	14	1	09	$240,000	Not Covered	$25,000
6	15	8	05	$250,000	Not Covered	$25,000
7	1	1	03	$195,365	$25,000	$25,000
7	2	4	03	$950,000	Not Covered	$25,000
7	3	1	09	$250,000	Not Covered	$25,000
8	1	4	06	$540,000	$50,000	$25,000
8	2	4	06	$247,780	Not Covered	$25,000
8	3	1	09	$325,000	Not Covered	$25,000
8	4	4	06	$411,501	Not Covered	$25,000
8	5	1	09	$150,000	Not Covered	$25,000
8	6	4	06	$25,000	Not Covered	$25,000
8	7	1	09	$100,000	Not Covered	$25,000
9	1	4	06	$151,050	Not Covered	$25,000
9	2	1	09	$200,000	Not Covered	$25,000
9	3	1	09	$620,000	Not Covered	$25,000
10	1	1	06	$103,686	$50,000	$25,000
10	2	1	06	$185,835	$40,000	$25,000
10	3	1	06	$103,686	$15,000	$25,000
10	4	1	06	$120,000	$15,000	$25,000
10	5	1	06	$228,720	$15,000	$25,000
10	6	1	09	$300,000	Not Covered	$25,000
11	1	4	06	$190,600	Not Covered	$25,000
11	2	1	09	$250,000	Not Covered	$25,000
12	1	4	06	$137,232	Not Covered	$25,000
12	2	1	09	$300,000	Not Covered	$25,000
15	1	6	09	$250,000	Not Covered	$25,000
16	1	6	09	$100,000	Not Covered	$25,000
16	2	6	09	$100,000	Not Covered	$25,000
17	1	4	03	$50,000	Not Covered	$25,000
17	2	1	09	$50,000	Not Covered	$25,000
17	3	1	09	$50,000	Not Covered	$25,000
18	1	6	09	$200,000	Not Covered	$25,000
19	1	6	09	$200,000	Not Covered	$25,000
20	1	6	09	$200,000	Not Covered	$25,000
21	1	6	09	$200,000	Not Covered	$25,000
21	2	6	09	$200,000	Not Covered	$25,000
21	3	6	09	$200,000	Not Covered	$25,000
22	1	6	09	$200,000	Not Covered	$25,000
23	1	6	09	$200,000	Not Covered	$25,000
24	1	6	09	$200,000	Not Covered	$25,000
25	1	6	09	$200,000	Not Covered	$25,000
26	1	6	09	$200,000	Not Covered	$25,000
27	1	6	09	$200,000	Not Covered	$25,000

28	1	6	09	$200,000	Not Covered	$25,000
29	1	6	09	$200,000	Not Covered	$25,000
30	1	6	09	$200,000	Not Covered	$25,000
31	1	6	09	$200,000	Not Covered	$25,000
32	1	6	09	$200,000	Not Covered	$25,000
33	1	6	09	$200,000	Not Covered	$25,000
34	1	6	09	$200,000	Not Covered	$25,000
35	1	6	09	$200,000	Not Covered	$25,000
36	1	6	09	$200,000	Not Covered	$25,000

Coverages C and D:

Loss of Income:	Loss sustained up to: $3,000,000	per occurence
Extra Expense:	Loss sustained up to: $3,000,000	per occurence

CHAPTER IV--NATURAL HAZARD MITIGATION STRATEGY

Mitigation Goals

The EID Local Hazard Mitigation Plan has identified the *natural* hazards that could impact its operations, staff personnel, local residents, and the public, and has assessed the risks inherent to each hazard.

It is a goal of EID to implement measures that are designed to lessen the effects of natural risks and hazards, and this Mitigation Plan is a means to that end. For example, within its jurisdictional areas, EID works hard to decrease the chance of wild land fires by awareness training of personnel, and (on occasions), *contracting-out* to reduce the fuel load in areas of heavy vegetation. A grant program would add to our ability to abate or mitigate the future potential of wildland fires by increasing prevention activities and defensible spaces.

The goals identified in the EID Natural Hazard Mitigation Plan are to:

- Save lives and protect property.
- Reduce impact of future disaster events.
- Enable post-disaster funding.
- Hasten recovery from disasters.
- Demonstrate a dedication to improving the District's Environmental and Safety Programs.

These goals are applicable to all natural hazards identified in this plan. Although broad in scope, their intent, namely to reduce the threat of natural hazards through mitigation approaches, is still quite clear in definition and vision. From these goals come the objectives of El Dorado Irrigation District's Local Hazard Mitigation Plan. The objectives are arranged in a manner that addresses each natural hazard individually. From the goals, objectives are derived, and from the objectives, actions are formulated.

A final set of objectives addresses mitigation measures that are applicable to all natural hazards identified within the Plan.

Prioritizing Mitigation Measures

In order to identify which natural hazards pose the greatest threat to EID operations, the Probability and Risk Assessments from Section III of this plan were scaled and quantified to provide an overall assessment of where the greatest threats from natural hazards lie. From this matrix, an initial measure of the identified natural hazards was calculated. This Probability/Risk Assessment Scoring Matrix provides a fundamentally sound, broad-based foundation from which to build more refined comprehension of natural hazard threats within EID in the future.

Natural Hazard Probability/Risk Assessment Scoring Matrix

SCALING	NATURAL HAZARD	PROBABILITY	RISK	TOTAL	THREAT
Very Low = 1	Dam Failure*	2	2	4	Very Low
Low = 2	Avalanche	2	1	3	
Moderate Low =3	Drought	4	3	7	
	Pandemic	4	3	7	
Moderate = 4	Earthquake	5	4	9	
Moderate/High = 5	Landslide	5	4	9	
High = 6	Flood	5	4	9	
Very High = 7	Severe Storm	4	3	7	
	Wildland Fire	6	5	11	Very High

*Probability/Risk can vary depending upon age and configuration

Mitigation Objectives

The following is a list of objectives developed in conjunction with the overall goals of this plan. Within each objective, one or more actions designed to facilitate the realization of the objective are identified. The objectives are sorted by specific natural hazards and are arranged in the order of priority identified in the Natural Hazard Rating Table. The highest priority objectives and actions are listed first, with the lowest priority objectives and actions listed last.

WILDLAND FIRES

Objective #1: Minimize the threat to lives and property posed by the possibility of wildland fire within EID boundaries.

Action 1.1: Reduce fuel loading within identified District areas subject to wildland fires.
Timeframe: On-going.
Funding: Funding required.
Staff: Individual property owners, ED County Fire Safe Council, the California Conservation Corp, U.S. Forest Service, and affected government agencies.
Action 1.2: Identify fire prone areas surrounding established facilities within the District with strong potential for fires. Develop partnerships with County Fire and adjacent neighbors to institute weed/brush abatement around/near EID facilities.
Timeframe: On-going.
Funding: Funding required.
Staff: ED County's Fire Safe Council. CalFIRE
Action 1.3: County fire requires road re-construction to facilitate emergency vehicle ingress and egress. (i.e., road to be widened at DCWWTP)
Timeframe: Ongoing
Funding: Funding required.
Staff: Contract personnel

EARTHQUAKES

Objective #2: Minimize the threat to lives and property as a result of a possible earthquake with the El Dorado County region.

Action 2.1: Hire contract personnel to ensure the construction features of existing structures are seismically safe buildings and meet State Building and Fire Codes.
Timeframe: 5 years.
Funding: Funding required.
Staff: Building Department.
Action 2.2: Inspect all District buildings and, where applicable, upgrade structures to withstand earthquake events.
Timeframe: Ongoing.
Funding: Funding required.
Staff: Outside contract specialists
Action 2.3: Develop and distribute an employee guide to earthquake preparedness techniques.
Timeframe: 2 years.
Funding: Funding required.
Staff: To be determined

SEVERE STORMS

Objective #3: Lessen storm related damage for all types of severe storms that impact EID.

Action 3.1: Review County ordinance to facilitate adequate snow storage and drainage easements. Petition to correct as necessary.
Timeframe: 2 years.
Funding: Funding required.
Staff: Hydro-Electric; Drinking Water; Outside contractor

FLOODS

Objective #4: Minimize the threat to lives and property posed by the possibility of flood within the District jurisdiction.

Action 4.1: Review recognized flood-prone areas and match to exposures of personnel, facilities and equipment.
Timeframe: 2 years.
Funding: No funding required at this time.
Staff: Planning Department.
Action 4.2: Work with County to ensure that all bridges within District jurisdiction are structurally safe from failure during peak flow scenarios.
Timeframe: 2 years.
Funding: Funding may be required.
Staff: Outside Support: County Fire; Public Works Department; California Department of Transportation.

Action 4.3: Stockpile pumps, sandbags and related equipment in order to ensure an adequate supply to combat erosion during flood events. Develop a quick response team.
Timeframe: Ongoing.
Funding: Funding required.
Staff: To be determined

LANDSLIDES

Objective #5: Reduce landslide events and overall soil erosion within District property jurisdiction.
Action 5.1: As part of District *road maintenance*, inspect road cuts and fills for signs of slope failure. Stabilize slopes as necessary.
Timeframe: On-going.
Funding: Funding may be required.
Staff: Internal work crews
Action 5.2: Identify questionable hillsides. Construct "rock pens" and drill & anchor points, and provide cut and fill techniques for finished slopes at the angle of repose.
Timeframe: 3 years.
Funding: Funding required.
Staff: Internal and external support
Action 5.3: Work with County to identify grading ordinance, ensure that all disturbed slopes are re-vegetated after grading to reduce erosion potential while promoting slope stabilization.
Timeframe: On-going
Funding: Funding required
Staff: Internal/external

DROUGHT

Objective #6: Minimize the threat to property posed by the possibility of drought within El Dorado County.
Action 6.1: Update the homeowner's guide to water conservation techniques.
Timeframe: 1.5 years.
Funding: Additional funding may be required.
Staff: District Customer Service Department.
Action 6.2: Construct additional "closed" water reservoirs to for growing customer base.
Timeframe: On-going
Funding: Funding required
Staff: Internal/external

PANDEMIC

Objective #7: Minimize the possibility of a reduced work force (possibly creating reduced service) should a pandemic outbreak occur.

Action 7.1: Establish and implement a written program that outlines plans to communicate and educate personnel and their families about pandemic outbreaks, the impact of a pandemic on District operations, and possible impact to customer service and the public's needs.
Action 7.2: Obtain assistance from outside resources to assist in the development of a written document for planning purposes.
Timeframe: 1.5 years.
Funding: Funding source required.
Staff: County Department of Health Services and County Sheriff's Office

AVALANCHE

Objective #8: Improve techniques of informing workers and the public on the level of avalanche danger within the District's backcountry regions in order to diminish the threat to lives and property posed by the potential for avalanche.
Action 8.1: Obtain equipment to monitor avalanche warning information systems that will inform and warn backcountry users of the current level of snow and rock avalanche danger.
Timeframe: 4 years.
Funding: Funding source required.
Staff: Sheriff's Office.
Action 8.2: Construct "rock pens" and drill & anchor points, and provide cut and fill techniques for potential areas of concern.
Timeframe: 3 years.
Funding: Funding required.
Staff: Internal and external support
Action 8.3: Educate District personnel on cold weather survival, skis and snowshoe travel.
Timeframe: On-going.
Funding: Funding required.
Staff: Cold weather survival school and ski resort personnel.
Action 8.4: Train additional personnel in the safe operation of the Districts Snow Cat vehicles and become a "mutual aid" resource.
Funding: Funding required.
Staff: Vendor.

Implementing Mitigation Strategies

Many mitigation measures are preexisting functional strategies. The actions listed above are included as a means of reinforcing those current hazard mitigation efforts. Some may be linked to jurisdictionally specific codes and ordinances or to existing plans under the El Dorado County Plan. In all cases, the EID Hazard Mitigation Plan seeks to function in harmony with and as an enhancement to preexisting plans, ordinance, rules and regulations.

Where mitigating actions are new and not a part of any preexisting governmental or organizational decree, the implementation of these action strategies will be contingent upon the necessary approvals from the appropriate governmental bodies and the securing of necessary funding from yet to be determined sources. Generally speaking, EID has only limited funding available for natural hazard mitigation. Thus, EID will look to secure federal and state natural

hazard mitigation grant funding in an effort toward implementing mitigation strategies. We plan on consulting the comprehensive list of federal mitigation programs, activities, and initiatives online through the Federal Emergency Management Agency's website (accessed at http://www.fema.gov/doc/fima/fmpai.)

A primary emphasis will be placed upon implementing actions that provide the highest cost-to-benefit ratio. Knowing that funding is an ever-present issue, all effort will be given to identify actions most beneficial to the citizens and property within the County. The greatest natural hazard threat to lives and property is wildland fire. Wildland fire is the highest-scoring natural hazard threat in the Natural Hazard Probability / Risk Assessment Scoring Matrix. Therefore, it is clearly indicated that mitigation actions focused toward reducing the threat of wildland fires in the District have the greatest cost-to-benefits ratios and will provide the greatest mitigative relief in everyone's interest.

Plan Maintenance

EID's Local Hazard Mitigation Plan will be reviewed every year to ascertain its continued effectiveness. As part of this evaluation, the overall effectiveness of the plan will be considered in context to:

- Assess the number of natural hazard mitigation projects effectively completed
- Review the number of mitigation projects currently in progress, and
- Consider the success of related programs and activities associated with the plan.

Additionally within these annual evaluations, natural hazard mitigation strategies will be examined for a continued level of appropriateness in relationship to any changes in land uses or the level of intensity associated with prevailing land uses. Participants of the plan may be asked to provide an annual evaluation report of the status of natural hazard mitigation efforts within their respective jurisdictions.

Whenever the annual evaluation indicates a necessity to update the plan, an update of the plan will be initiated. Regardless of the plan's status, a mandatory update to EID's Plan will occur every five years in conjunction with the annual plan evaluation process.

Responsibility for organizing annual and all Plan updates/reviews will fall to the District's Safety Officer and Funding Analysis Departments, and will take responsibility for agendizing and noticing all action related to our plan review or update. Timing will be coordinated with the El Dorado County Office of Emergency Services (OES). The OES will be the determining body when assessing the need for any plan update in excess of the fixed five-year update period.

EID is committed to public involvement within this hazard mitigation plan. For both the plan review evaluation and update, a public hearing may be held by the EID Board. The hearing will be publicized and the public will be asked for comment concerning the plan.

In conjunction with El Dorado County, EID will strive to continue to develop our Local Plan as an outstanding planning tool, helping the citizens and customers of the El Dorado Irrigation District to create a safer place to live, work, and play.

ATTACHMENT "A"

DISTRICT BOUNDARY MAP (Next Page)

Updated Plan Submitted by: Mike Bristow, EID Safety/Security Officer

RESOLUTION OF THE BOARD OF DIRECTORS OF EL DORADO IRRIGATION DISTRICT EL DORADO COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

WHEREAS, Congress decided that the Federal Emergency Management Agency (FEMA) should place more emphasis on the planning process to promote and support sustainable, disaster resistant communities; and,

WHEREAS, The Disaster Mitigation Act of 2000 (DMA 2000) amended the Robert T. Stafford Disaster Relief and Emergency Assistance Act by adding a new section, 322-Mitigation Planning. Mitigation is defined as "sustained action taken to reduce or eliminate long-term risk to people and their property from hazards and their effects and;

WHEREAS, effective November 1, 2004, a mitigation plan approved by FEMA and the State is required from any community that wishes to obtain funding from the Hazard Mitigation Grant Program (HMGP) or the Pre-Disaster Mitigation (PDM) Program to reduce potential damages;

NOW, THEREFORE, BE IT RESOLVED AND ORDERED, that the El Dorado Irrigation District's Board of Directors have reviewed and hereby adopts this El Dorado County Multi-Jurisdictional Hazard Mitigation Plan for the benefit of the County of El Dorado for the purpose of increasing safety for its citizens during natural hazard events, while reducing the risk of loss of life and property.

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The foregoing Resolution was introduced at a regular meeting of the Board of Directors of the EL DORADO IRRIGATION DISTRICT, held on the 13th day of July 2009, by Director George, who moved its adoption. The motion was seconded by Director Norris and a poll vote taken which stood as follows:

AYES: Directors George, Norris, Osborne, Fraser, and Wheeldon

NOES:

ABSENT:

ABSTAIN:

The motion having a majority of votes "Aye", the resolution was declared to have been adopted, and it was so ordered.

George A. Wheeldon, President
Board of Directors of
EL DORADO IRRIGATION DISTRICT

ATTEST:

Jennifer Aldridge
Clerk to the Board

(SEAL)

I, the undersigned, Clerk to the Board of the EL DORADO IRRIGATION DISTRICT hereby certify that the foregoing resolution is a full, true and correct copy of a Resolution of the Board of Directors of the EL DORADO IRRIGATION DISTRICT entered into and adopted at a regular meeting of the Board of Directors held on the 13th day of July, 2009.

Jennifer Aldridge
Clerk to the Board
EL DORADO IRRIGATION DISTRICT