All - Hazard Mitigation Plan 2003

Approved by the

Hinsdale County Board of Commissioners

Date

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EXECUTIVE SUMMARY

The Hinsdale County Hazard Mitigation Plan was compiled to assist Hinsdale County in reducing and mitigating future losses from natural and man-made hazard events. The plan was developed by Hinsdale County Emergency Services with input by the Hinsdale County Local Emergency Planning Committee, and contains the tools necessary to identify specific hazards and aspects of existing and future mitigation efforts.

Section 322, Mitigation Planning, of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (the Act), enacted by Section 104 of the Disaster Mitigation Act of 2000 (DMA) (P.L. 106-390) provides new and revitalized approaches to mitigation planning. Section 322 emphasizes the need for State, local, and tribal entities to closely coordinate mitigation planning and implementation efforts. It continues the requirement for a State mitigation plan as a condition of disaster assistance, and creates incentives for increased coordination and integration of mitigation activities at the State level through the establishment of criteria for two different levels of State mitigation plans, "standard" and "enhanced." States that demonstrate an increased commitment to comprehensive mitigation planning and implementation through the development of an approved enhanced mitigation plan can increase the amount of funding available through the Hazard Mitigation Grant Program (HMGP). Section 322 also establishes a new requirement for local mitigation plans, and authorizes up to 7 percent of HMGP funds available to a State to be used for development of State, local, and tribal mitigation plans. [At this time, the Administration is considering changes to FEMA's mitigation programs that would become effective in October 2002. However, States and localities will still be required to have plans in effect, which meet the minimum requirements of Section 322, as a condition of receiving mitigation assistance after November 1, 2003.] As part of the process of implementing the DMA, FEMA prepared an Interim Final Rule (the Rule) to clearly establish the mitigation planning criteria for States and local communities. This Rule was published in the Federal Register on February 26, 2002, at 44 CFR Part 201. After an appropriate period of time, during which comments will be accepted on the Rule, and the utility and practicality of these criteria can be evaluated, FEMA may revise the Interim Final Rule and publish a Final Rule. However, until such time, the Rule will serve as the governing document for DMA planning implementation.

To further help States, local, and tribal governments meet the new DMA planning requirements, FEMA has prepared this guidance, titled *State and Local Plan Interim Criteria Under the Disaster Mitigation Act of 2000.* This guidance was prepared with two major objectives in mind:

- To help federal and State reviewers evaluate mitigation plans from different jurisdictions in a fair and consistent manner; and
- To help states and local jurisdictions develop new mitigation plans or modify existing

ones in accordance with the criteria of Section 322. The *Plan Criteria* includes references to specific language in the Rule, descriptions of the relevant criteria, and sample plan text to illustrate differences between plan approaches that would and would not meet DMA criteria. In addition, this document provides references to a number of planning tools that FEMA has made available to assist States and localities in developing a comprehensive, multi-hazard approach to mitigation planning, and in preparing plans that will meet the requirements of the DMA. These tools include: *State and Local Mitigation Planning How-to Guides* – intended to help States and communities plan and implement practical, meaningful hazard mitigation measures (FEMA 386-1 to FEMA 386-7);

- *Planning for a Sustainable Future* (FEMA 364) and *Rebuilding for a More Sustainable Future* (FEMA 365) – two related volumes that provide guidance for integrating sustainable practices as part of pre- and post-disaster mitigation planning efforts; and
- *FEMA Mitigation Resources for Success* (FEMA 372) – a compact disc with a compendium of FEMA resources related to mitigation practices and projects.

In addition, FEMA has prepared DMA 2000-related training and workshop materials for FEMA regional staff, States, and local communities based on the *Plan Criteria* and the reference material described above.

The following natural hazards are addressed:

* Flooding
* Wildfire
* Ice & snow events
* Mudslides
* Earthquake
* Drought

The following man-made hazards are addressed:

* Power outages
* Technological Hazards
* Transportation Accidents
* Terrorism

The list of critical facilities:

* Dams, Water Treatment, Water Storage
* Electric Power lines, sub-stations

* Telephone facilities
* Fire stations and law enforcement facilities
* Schools and Universities
* Transportation Routes:
* Governmental buildings

The list of areas of concern include:

* Rio Grande Reservoir, as the largest Reservoir in Hinsdale County
* Known flooding locations
* Urban/Forest interface for wildfire hazards
* Facilities storing gas, propane and chemicals
* Transportation routes such as mountain passes.

The Hinsdale County Hazard Mitigation Plan is considered a living document that should be revisited on a regular basis for updates and if priorities should change. Copies will be available for all governmental departments, schools, and all emergency responders.

CHAPTER 1. INTRODUCTION

A. Background

The Colorado Office of Emergency Management (COEM) has a goal for all communities within the state of Colorado to establish local hazard mitigation plans as a means to reduce and mitigate future losses from natural or man-made hazard events. The COEM outlines a program whereby communities throughout the State may be eligible for grants and other assistance upon completion of a local hazard mitigation plan. COEM has been able to provide other plans for models to their communities to assist with building local plans.

The Hinsdale County Hazard Mitigation Plan was prepared by participants of the Local Emergency Planning Committee. The Hinsdale County Hazard Mitigation Plan serves as a strategic planning tool for use by Hinsdale County, and the cities and towns within, in efforts to identify and mitigate the future impacts of natural and/or man-made hazard events. This plan does not constitute any section of the Hinsdale County Master Plan or Land Use Resolutions.

B. Methodology

In 2003 the Hinsdale County Local Emergency Planning Committee started reviewing their Emergency Response plan as part of the FEMA Supplemental requirements. At this time the LEPC started formulating the Hazard Mitigation Plan. We used models from Gunnison County who had

used other plans as well. The LEPC meets on a quarterly basis and all members were delivered copies of each section by e-mail to review. Changes were made according to outcome of the quarterly meetings and remarks submitted after reviewing the e--mail copies. A ten step process was conducted to compile the Hinsdale County Hazard Mitigation Plan.

1. Step 1 - Map the Hazards

   Hinsdale County Participants identified areas where damage from historic natural disasters that have occurred and areas where critical man-made facilities and other features may be at risk in the future for loss of life, property damage, environmental pollution and other risk factors. We used maps that were in place in Hinsdale County because maps with GIS (Geographic Information Systems) were not available at the time in identifying past and future hazards.

2. Step 2 - Identify Critical Facilities and Areas of Concern

   Participants then identified facilities and areas that were considered to be important to the community for emergency management purposes, for provision of utilities and community services, evacuation routes, and for recreational and social value. Using a GPS (Global Positioning System) the LEPC plotted the exact location of these sites on a map. Once these facilities and areas were identified, LEPC attempted to calculate the potential loss of each facility based on its assessed value.

3. Step 3 - Identifying Existing Mitigation Strategies

   After collecting detailed information on each critical facility in Hinsdale County the participants identified existing mitigation strategies relative to flooding, fires, ice and snow events, earthquakes, transportation accidents and terrorism.

4. Step 4 - Identifying the Gaps in Existing Mitigation Strategies

   The existing strategies were then reviewed for coverage and effectiveness, as well as the need for improvement. The Hinsdale County Emergency Management Plan was also referenced to avoid replication of existing protection measures.

5. Step 5 - Identify Potential Mitigation Strategies

   A list was developed of additional hazard mitigation actions and strategies for Hinsdale County. Potential actions include improving emergency services (i.e.

upgrading the communication system) and public information (EAS and cable access programs).

6. Step 6 - Prioritize and Develop the Action Plan

   The proposed hazard mitigation actions and strategies were reviewed and each strategy was rated (good, average, or poor) for its effectiveness according to 7 factors (e.g.,technical and administrative applicability, political and social acceptability, legal authority, environmental impact, financial feasibility). Each factor was then scored and all scores were each totaled for each strategy. Strategies were ranked by overall score for preliminary prioritization then reviewed again under step 7.

7. Step 7 - Determine Priorities

   The preliminary prioritization list was reviewed in order to make changes and determine a final prioritization for new hazard mitigation actions and existing protection strategy improvements identified in previous steps. LEPC also presented recommendations to be reviewed and prioritized by emergency responders and officials.

8. Step 8 - Develop Implementation Strategy

   Using the chart provided under Step 9 in the process, an implementation strategy was created which included person(s) responsible for implementation (who), a time line for completion (when), and a funding source and/or technical assistance source (how) for each identified hazard mitigation action.

9. Step 9 - Adopt and Monitor the Plan

   Hinsdale County Emergency Services (HCES) compiled the results of Steps 1 to 8 in revised draft was presented to the Hinsdale County Board of Commissioners.

10. Step 10 - Adoption
    After a public hearing the plan was adopted on _____

C. Hazard Mitigation Goals and Objectives of the State of Colorado

1. To improve upon the protection of the general population, the residents of the

County and guests, from all natural and man-made hazards.

2. To reduce the potential impact of natural and man-made disasters on the County's priority list of Critical Support Services.

3. To reduce the potential impact of natural and man-made disasters on Critical Facilities in the County.

4. To reduce the potential impact of natural and man-made disasters on the County's infrastructure.

5. To improve Emergency Preparedness.

6. Improve the County's Disaster Response and Recovery Capability.

7. To reduce the potential impact of natural and man-made disasters on private property.

8. To reduce the potential impact of natural and man-made disasters on the County's economy.

9. To reduce the potential impact of natural and man-made disasters on the County's lifestyle.

10. To reduce the County's liability with respect to natural and man-made hazards generally.

11. To reduce the impact of natural and man-made disasters on the County's specific historic treasures and interests as well as other tangible and intangible characteristics which add to the quality of life of the citizens and guests of the area.

12. To identify and introduce and implement cost effective Hazard Mitigation measures so as to accomplish the County's Goals and Objectives and to raise the awareness of, and acceptance of Hazard Mitigation generally.

D. Acknowledgments

Hinsdale County Emergency Services extends special thanks to those that assisted in the development of this Plan:

* Sheriff William B. Denison
* Jerry Gray, Hinsdale County Emergency Manager
* Bobby McDonald, Hinsdale Sheriff
- Joann Stone, Gunnison County Emergency Services
- Tricia Hart, Gunnison County Emergency Services
- Ed Neddleton, Hinsdale County Fire Chief
- Robert Hurd, Hinsdale County Road & Bridge
- Carl Hurst, District 62 Water Commissioner
- Town of Lake City

CHAPTER II. COMMUNITY PROFILE

A. Location, Topography and Environmental Features

Hinsdale County is located in Southwestern Colorado, approximately 275 miles SW of Denver. Hinsdale County is surrounded by 14,000 ' Mountains and is approximately 1,200 square miles in size.

Hinsdale County is almost 94% public land and 6% private land. Hinsdale County is home to 5 of the most popular Fourteeners in Colorado which are Uncompahgre, Handies, Redcloud, Wetterhorn and Sunshine peaks. Hinsdale County is home to over 800 people and shows peak season populations of almost 2,000. Those peak seasons have now increased to 3 months of summer tourism and seasonal residents, 4 months of hunting season (Colorado boasts the largest herd of elk in the nation) and 4 months of snowmobile/ski season.

Hinsdale County includes one city (Lake City) and several small unincorporated towns such as Cathedral & Debs. Hinsdale County is home to almost 48 subdivisions with many of those located against Wilderness Areas.

Hinsdale County has over 252 miles of roads to maintain, not including several more miles of trails. Hinsdale County has over 332 miles of waterways and has a combined water storage of 152,723 in reservoirs and lakes.

Hinsdale County has three major rivers, Lake Fork of Gunnison River, Cebolla and Henson with several smaller – Clear Creek, Little Squaw Creek, Trout Creek, Devils Creek, Cottonwood Creek, North Clear Creek, Big Spring Creek, South Clear Creek, Bear Creek, Crooked Creek, Lost Trail Creek, Texas Creek, Ute Creek, Weminuche Creek, Willow Creek and hundred miles of streams and ditches.

In addition to Lake San Cristobal - Hinsdale also has Continental Reservoir, Rio Grande Reservoir, Williams Creek Reservoir, Rito Hondo Reservoir, Santa Maria Reservoir, Road Canyon Reservoir, Trail Ridge Reservoir, S Lazy U Reservoir and many smaller lakes.

Hinsdale County's largest economic base is tourism, ranching, and recreation. Hinsdale hosts one of the major scenic attractions, Alpine Loop & Silver Thread Scenic & Historic Byways in Colorado. Hinsdale County has historically hosted events that bring thousands of visitors such as the Alferd Packer Massacre Site, Snowmobile Meets and events, Hot Air Balloon Show, 4th of July fireworks

display, Bike Races and runs, and a host of several other outdoor activities.

Table 1. Reservoirs in Hinsdale County

Reservoir	Storage in acre feet	Coordinates for Dams
Santa Maria	30,100	N37 38” xW107 04”
Lake San Cristobal	30,400	N37 59” x W107 17”

Continental Reservoir	22,679	N37 57” x W107 12”
Rito Hondo	561	N37 53" x W107 10”
Road Canyon	1,367	N37 46” x W107 10”
Rio Grande	52,192	N37 43” x W107 15”

Williams Creek Reservoir	10,084	N37 30” x W107 13”

B. Current Development Trends

Of the 1,200 square miles of land contained within Hinsdale County 96% of that is public lands controlled by either US Forest Service, Bureau of Land Management, Bureau of Reclamation, Colorado State Forest Service, or Division of Wildlife.

The climate of Hinsdale is such that it attracts those who are interested in some type of outdoor recreation and those people who want to build seasonal homes. Some want those for ski seasons, some for hunting or fishing and others who enjoy the cooler temperatures in the summer.

Many of those build near the major highways within the county such as U.S. Hwy 149. Others want to build in the most remote areas they can find which is generally against a Wilderness or Primitive Area.

Hinsdale is 55 miles from Lake City. Hinsdale has one U.S. Highway, HWY 149, that runs through the county which serves as the major transportation route for motorists and for freight. There is no railroad in Hinsdale County. There are almost 48 subdivisions in Hinsdale County. A Land Use Resolution was adopted in 1979 to try to better manage the growth, and the impact that growth has on our lifestyle.

Hinsdale water supplies vary from reservoir storage to wells. Lake City water system is provided by storage tanks located throughout the city. Some of the remote subdivisions are served by independent wells and others by central systems supplied by wells.

Contamination from septic systems is controlled through a permit system that requires soil samples, test holes, PERC tests and space available. The environmental health department also takes care of septic tank perm

CHAPTER III: HAZARDS IN HINSDALE COUNTY

A. What are the Hazards?

According to the evaluation system, the following hazards were determined to be of concern for Hinsdale County.

Avalanche
Dam Failure
Flooding
Wildfire
Ice & Snow events
Mud/land slides
Earthquake
Drought
Power outages
Technological Hazards
Transportation Accidents
Terrorism

These are not necessarily listed in priority nor in the possibility in occurrence because these will change from year to year due to related circumstances such as amount of moisture, temperatures, etc.

Table 2. Past Hazard Events within Hinsdale County

Hazard	Year	Location	Critical Facility or area Impacted	Remarks/Description
Wildfire	1958	Lost Trail Creek		

Dam Failure	1972	Hidden Treasure	Flooded Henson Creek, contaminated Henson Creek/Lake Fork of Gunnison	Arsenic/fish kill
Wildfire	1978	Pennington Park		
Flood	1984	Town of Sherman	Flooded Sherman and Camp Redcloud	Washed out bridge
Landslide	1999	Lake San Cristobal, Sherman, West Lost Trail Creek	Lake San Cristobal, Sherman, West Lost Trail Creek	Earth flow
Hazmat	1999	Hwy 149	Propane Yard	
Wildfire	2002	Missionary Fire	Forest,Property	
Earthquake	1955	Hinsdale County		

Past Events in Hinsdale County cont.

Propane Storage North of Lake City


Slumgullion land/mud slide

C. Potential Hazards to Critical Facilities and Areas of Concern

After past events have been identified, the next step in the planning process is to determine where future hazards could potentially occur and what structures or areas could be affected. This requires determining which facilities and areas in the community are considered critical and why they are considered critical (i.e. is the facility in the flood plain? Storing Hazardous materials? A primary shelter?) Each critical facility was mapped, again using GIS. Table 3 represents the critical facilities and areas of concern identified by Hinsdale County. Section IV will present an analysis of each of these facilities and areas in the community and their priority in case of an emergency.

Facility selected as highest hazard facility with Hinsdale County is Lake San Cristobal (pictured above) because of its vulnerability to man-made disasters, Bio-Terrorism Target, and potential failure due to earthquake. Breach of involvement with this Dam would affect the largest area, the most cities and towns.

Table 3: Hazards to Critical Facilities and Areas of Concern in Hinsdale County

Facility Name	Address	Facility Type	Generator (Y/N)	100 yr	500 yr	Size floors	Type of Hazard
Hinsdale Sheriff's Office	311 N Henson	Law	n	n	n		
Hinsdale County Evidence Storage	317 N Henson	Law	n	n	n		
EOC	311 N Henson	law/ govt	n	n	n		
Lake City Fire Dept.	129 N Henson	Fire	n	n	n		
Lake City Medical Center/EMS	700 N Henson	Fire	n	n	n		
First National Bank	231 N Silver	Financi al Institute	n	n	n		
Crook Falls Power Plant	930B Hwy 149	Power plant	y	n	n		
Lake City Power Plant		Power Plant	y	n	n		
Hinsdale County Shop	1775 N Hwy 149	mtnce	y	n	n		
Propane Storage	1775 N Hwy 149	Fuel	n	n	n		

Propane Storage	Sportsman Texaco	Fuel	n	n	n		
Hinsdale County Court House	317 N Henson	govrn	n	n	n		
Lake City Town Hall	230 N Bluff	Gvrn	n	n	n		
Santa Maria Pipeline		water supply	n	n	n		
Lake City Water Storage	N & S	Water supply	n	n	n		
Lake City Water Wells	Bluff Street	Water supply	n	n	n		
Continental Reservoir Dam		Water	n	n	n		Water Supply
Rito Hondo Reservoir Dam		Water	n	n	n		Water Supply
Rio Grande Reservoir Dam		Water	n	n	n		Water Supply
Hermits/Brown Lakes Dam		Water	n	n	n		Water Supply
Williams Creek Reservoir Dam		Water	n	n	n		Water Supply
Road Canyon Reservoir		Water	n	n	n		Water Supply

Hill 71		Communications	y	n	n		Radio Towers
Lake City Armory	230 N Bluff	Shelter	n	n	n		
Lake City Post Office	803 N Gunnison	govrn	n	n	n		
Lake City School	614 N Silver	govrn	n	n	n		
Lake City Sewer Plant	912 Hotchkiss	Treat	y	n	n		Water Treatment
Lake City Chamber of Commerce	800 Gunnison Ave.	Govrn	n	n	n		Information Center

CHAPTER IV: PRIORITIZING CRITICAL FACILITIES AND AREAS OF CONCERN

A. Category 1: Emergency Response Services and Facilities

The County has identified the following emergency response services and facilities as the highest priority for protection from natural and man-made hazards.

1. Emergency Operations Center
   * Sheriff's Office
   * Evidence Storage
   * EOC
   * Lake City Fire Department

2. Government
   * Hinsdale County Court House
   * Lake City Town Hall
   * Chamber of Commerce
     Post Office

3. Fire & EMS
   * Hinsdale County Fire Dept.
   * Hinsdale County EMS
   * Lake City Medical Center

4. Public Works/Road & Bridge
   * Hinsdale County Public Works
   * Hinsdale County Road & Bridge
   * Hinsdale County Shop
   * Colorado DOT Shop

5. Emergency Fuel Stations

* Sportsman Texaco
* Propane Storage Hwy 149

6. Emergency Shelters
   * Lake City Armory
   * Lake City School
     Hinsdale County Shop

7. Evacuation Routes
   * U.S. Hwy 149 North & South
   * Engineer Pass (summer only)
   * Cinnamon Pass (summer only)
   * U.S. Hwy 50 East & West
   * U.S. Hwy 160 South Fork
     County Road 25 Pine Creek
     County Road 26 Sapinero/Lake City Cut-off

8. Bridges Located on Evacuation Routes
    * Iola Bridge Hwy 149
    * Lake Fork Bridge
    - Dawn of Hope Bridge
    - Cebolla Creek Bridge (Powderhorn)

9. Communications Towers
    * Hill 71
    * Round Mountain

B. Category 2: Facilities and Areas to Protect in a Hazard Event.

1. Water Supplies
   Lake City East Water Tank
   Lake City West Water Tank

2. Water Treatment Plants
   * Lake City Sewer Plant

3. Water Wells
   * Water Well Bluff St.
   * Water Well Lake Fork Mem. Park

4. Waste Removal
   * Utah's Sanitation

5. Grocery Stores
   * Country Store
   * Town Square Mini Market

6. Electric Plants
   * Power Plant Lake City Heights
   * REA
   * Crooks Fall Power Plant

7. Elderly Housing

* Willows Assisted Care (Gunnison)
* Mountain View Apartments (Gunnison)

8. Day Care Centers
   Secured Information

9. Bottled Gas Facilities
   * All Star
   * Amerigas

10. Commercial - Economic Impact - Areas Largest Employees
    * Hinsdale County
    *

12. Recreational Areas (capacity)
    * Lake San Cristobal
    * Lake Fork Memorial Park
    * Lake City Town Park
    * Deer Lakes Campground
    * Rio Grande Reservoir
    * Continental Reservoir
    * Rito Hondo Reservoir
    * Alpine Loop/Silver Thread Scenic route

13. Areas in the Flood Plain
    * Houses, Buildings, Dams, etc.
    * Hwy 149, Rio Grande Valley

14. Power lines along ditches and waterways.

15. Problem Culverts/Roads near Beaver Ponds/Seasonal Drainage

* Rio Grande Road Lower End
* Cebolla CR 50
* Henson Road (Bridge)

16. Roads and Highways in Avalanche Areas
    * Hwy 149, Slumgullion
    * Hwy 149, North
      County Road 30

17. Schools
    * Hinsdale County Community School

C. Category 3: Potential Resources

1. Potential Shelters
    * Hinsdale County Shop
    * Lake City Armory
    * Hinsdale County Community School
    * Community Presbyterian Church
    * St. James Episcopal
    * Glory to Glory Church
    * St. Rose of Lima Catholic Church
    * A&A Alpine Ranches
    * Alpine Village
    * Castle Lakes Campground Resort
    * Crystal Lodge
    * G&M Cabins

* Lake City Resort
* Matterhorn Mountain Motel
* Pleasant View Resort
* Alpine Moose Lodge
* Silver Spur
* The Texan Resort
* Town Square Cabins
* Vickers Ranch
* Wagon Wheel Resort

Chapter V: Determining How much will be Affected

Identifying Vulnerable Facilities

It is important to determine which critical facilities are the most vulnerable and to estimate their potential loss. The first step is to identify the facilities most likely to be damaged in a hazard event. Vulnerable facilities were identified by comparing their location to possible hazard events. For example, all of the facilities within the 100-year flood plain were identified and used in conducting the potential loss analysis. Similarly, facilities located near steep slopes, earthquake sensitive areas, flood prone areas, etc. were identified and included in the analysis.

B. Calculating the Potential loss

The next step in completing the loss estimation involved assessing the level of damage from a hazard event as a percentage of the facility's structural value. The Federal Emergency Management Agency (FEMA) has developed a process in which replacement values for structures located in the 100 and 500-year flood plains can be calculated according to the amount of damage suffered. In Hinsdale County the assessed values were determined for every structure identified in the flood plain. The potential loss was then calculated by multiplying the assessed value of the structure by the percent of damage expected from a hazard event (i.e., 100-year, 4-foot flood, etc.). For example, FEMA estimated that in the event of a 100-year, 4-foot flood, structures in the 100-year flood plain would suffer 28% damage. Since the average assessed value for a single residential structure as of 2001, in Lake City 206,722, and in the outskirts of Lake City it was $207,473. The total approximate cost for the damage from this flood event would be $ 2,000,000. The following discussion summarizes the potential loss estimates to structures (residential and non-residential) due to natural or man-made hazard events.

Flash Flooding or Ice Jam Flooding

Low Risk
Considers eight foot flooding in 100 and 500-year flood plain areas and assumes that, on average, all structures receive 49% damage. The costs for repairing or replacing bridges, power lines, telephone lines, the wastewater treatment plant, contents of structures and loss of crop land values are not included in this estimate.

Residential damage: over 2,000,000
Non-Residential Damage: 5,000,000

Known flooding occurrences include:
-In 1972 Hidden Treasure Dam Failure
-In 1984 Lake Fork River
-In 1954 Lake San Cristobal Dam Failure

Medium Risk
Considers a four foot flood in 100-year flood plain areas and assumes that, on average, all structures receive 28% damage.

Residential Damage: In excess of 1,000,000
Non-Residential damage: 3,000,000

Low Risk
Considers one foot flooding in 100-year flood plain areas and assumes that, on average, all structures receive 15% damage.

Residential Damage: 500,000
Non-Residential damage: 2,000,000

Dam Breach

Medium Risk

Lake San Cristobal: N37 degrees 59 minutes, W107 degrees 17 minutes
Storage of Lake San Cristobal is 30,400 acre feet
Class 1 Dam

Rio Grande Reservoir: N37 degrees 43 minutes, W107 degrees 15 minutes
Storage of Rio Grande Reservoir is 52,192 acre feet

Class 1 Dam

Williams Creek Reservoir: N37 degrees 30 minutes, W107 degrees 13 minutes
Storage of Williams Creek is 10,084 acre feet
Class 1 Dam

Continental Reservoir: N37 degrees 57 minutes, W107 degrees 12 minutes
Storage of Continental Reservoir is 22,679 acre feet.
Class 1 Dam

Rito Hondo: N37 degrees 53 minutes, W107 degrees 10 minutes
Storage is 561 acre feet, and is owned Division of Wildlife
Class 2 Dam

Road Canyon: N37 degrees 46 minutes, W107 degrees 10 minutes
Storage is 1,367 acre feet
Class 2 Dam

Upper & Lower Browns Lake: N37 degrees 49 minutes, W107 degrees 10 minutes
Combined Storage is 732 acre feet
Class 2 Dam

Highest impact areas are:
-If Lake San Cristobal breached it would impact everything down stream on the Lake Fork River including the Town of Lake City and Blue Mesa Reservoir.
-If Rio Grande Reservoir breached it would impact the town of Creede, several structures and the town of South Fork.
-If Continental breached it would impact Santa Maria Reservoir and several structures.
-If Williams Creek breached it would impact several structures, Piedra River and the town of Pagosa Springs.
-If Road Canyon breached it would impact Rio Grande Reservoir, the town of Creede, several structures and the town of Pagosa Springs.

Wildfires

High Risk
Large forest areas adjoining highways, campsites, and recreational activity/lodging are susceptible to lightning strikes, unsupervised controlled burns, and accidental fire activity resulting in wildfires. Additional causes for wild land fires in Hinsdale County are increased drought conditions, additional subdivisions, increase in outdoor activity, timber

grouping, and reduction in quantity of water shed and run off. The board of county commissioners of Hinsdale County, may prepare, adopt, and implement a county fire management plan that details individual county policies on fire management for prescribed burns, fuel management, or natural ignition burns on lands owned by the state or county.

High Impact Areas
-Rio Grande National Forest
-Weminuche Wilderness
-La Garita Wilderness
-San Juan National Forest
-Powderhorn Wilderness
-Gunnison National Forest
-Uncompahgre Wilderness

Drought

High Risk

Drought is a condition of climatic dryness, which is severe enough to reduce soil moisture and water below the minimum necessary for sustaining plant, animal, and human life systems. Lack of annual precipitation and enforcement of strong conservation behavior could result in drought conditions. A number of secondary hazards are associated with drought. This will result in an increased fire danger in urban natural areas and the wildland/urban interface as well as wildland/open space areas. This also increases the risk to public safety personnel as they respond to these incidents. The reduction in vegetation cover will expose soil to wind and erosion. The quality of rivers and lake water will change and sediment transport regimes of streams will be altered. Deterioration in water quality is the result. This particular hazard affects the entire geographic area included in this plan.

Hinsdale County is now going on to 3 years of drought. There are daily satellite measurements, and weekly wildfire meetings to stay ahead of the drought.

Frequency: Likely, 10%-100% in the next year, or at least one chance in the next 10 years.

Potential Magnitude: Catastrophic, more than 50%

Potential Speed of Onset: More than 24 hours warning

Geographical Area Affected: Populated areas of the communities and Hinsdale

County(domestic needs) and widespread areas of the county (agricultural needs).

Influencing Factors: Seasonal Patterns, Temperature Patterns, Precipitation Patterns, and Growth.

Earthquakes

Medium Risk

The sudden movement on faults is responsible for large earthquakes. By studying the geologic characteristics of faults, geoscientists can often determine when the fault last moved and estimate the magnitude of the earthquake that produced the last movement. Because the occurrence of earthquakes is relatively infrequent in Colorado and the historical earthquake record is short, accurate estimations of magnitude, timing or location of future dangerous earthquakes in Colorado is impossible to estimate. However, geological research indicates that components (faults) of earthquakes are prevalent in Colorado. Damage and life loss from these types of hazards can be devastating to communities.

Frequency: Possible, 1% and 10% probability in next year, or at least one chance in the next 100 years.

Potential Magnitude: Critical, 25%-50%

Geographical Area Affected: Hinsdale County

Influencing Factors: Geologic studies indict over 100 active faults in Colorado

Extreme Winter Weather

High Risk

There are three types of winter events: blizzards, ice storms and extreme cold. All of these events are a threat to the community with sub-zero temperatures from extreme wind chill and storms causing low visibility for commuters. Snow storms are known to cause power outages, road closures, collapsed buildings, and avalanche danger. Because many of the passes are near or greater than 12,000 feet in elevation, there is a greater and extreme risk for traffic accidents to result in fatalities. In extreme weather such as temperatures of 20 degrees below zero or

colder - it is estimated that a power loss of over 6 hours would result in freezing of water and sewer lines to more than 50% of the population. Those not impacted by this would be seasonal homes (that are drained down during the winter and those residences and businesses with alternate power or heating systems not dependent on power such as fireplaces, wood stoves, etc.)

Terrorism

High Risk

This is a relatively new threat that must be addressed through security and awareness. Also training and equipping of local emergency response personnel in cooperation with state and federal agencies. We must consider the potential effects of terrorist activities on surrounding communities. Regional Mutual Aid Agreements specifically addressing terrorism are essential. After in depth calculations in conjunction with Weapons of Mass Destruction, it was concluded that Hinsdale County is now at high risk because of Lake San Cristobal.

Potential impact areas:
-Lake San Cristobal
-Rio Grande Reservoir Dam
-Williams Creek Dam

Landslides

High Risk

There are three major areas in Hinsdale County that are considered to be conductive to landslide activity. Those areas are Slumgullion, County Rd 30, County Rd 20, Rio Grande Reservoir Rd and HWY 149. The potential impact areas would be dirt roads and highways. Potential impact for residential areas are not listed because the majority of impact would be on transportation routes.

Hazardous Material Incidents

Moderate Risk

The Emergency Management Team separates these incidents into two categories, Fixed Facilities and Transportation. Fixed facilities include companies that store hazardous waste at their facility and also all hazardous waste sites. According to the Material Safety Data Sheets(MSDS), there are a few facilities in Hinsdale County that hold hazardous materials although none of them exceed the threshold amount. Transportation of hazardous materials are not common in Hinsdale County. Since Hinsdale County is surrounded by mountains and diverse terrain, transportation of hazmat materials are limited on high mountain passes with severe weather conditions, and ice, wildlife and debris on road ways. Hazmat transportation incidents have occurred on highway 149 all highways leading in and out of Hinsdale county, and making Hinsdale County moderate risk for hazardous material incidents.

Chapter VI: Existing Hazard Mitigation Programs

The following information identifies existing mitigation strategies for the hazards likely to effect Hinsdale County and evaluates the effectiveness of those strategies. This section outlines programs and recommends improvements and changes to these programs to ensure the highest quality emergency service possible. In March of 2000, the first Hinsdale County Emergency Management Plan was developed and put into effect. The development of this plan was a result of a traffic accident and airplane crash. The plan currently describes the preparation and emergency response necessary by the county to react to emergency situations that require the counties resources. The plan also provides information on the Emergency Response Teams, it's members, and their responsibilities in the case of an emergency. The remainder of the plan contains the procedure for specific hazards unique to Hinsdale County and the responsibilities of each department in the event of each hazard. In addition, Hinsdale County has a variety of other mitigation programs. Table 4 outlines the existing hazard mitigation programs in Hinsdale County, the responsible party, the areas of the county these programs protect, and suggested improvements or changes to these programs.

Table 4: Existing Mitigation Strategies and Proposed Improvements

Existing Protection program	**Description**	**Area Covered**	**Enforcement Department**	**Effectiveness**	**Improvements or Changes Needed**
Upper Gunnison River Conservancy District	Protects & develops water resources	Upper Gunnison basin	Seventh Judicial District Court Judge	Moderate	
US Soil Conservation	Protects and develops soil resources	All of Hinsdale County	USDA	Moderate	

Redundant Communication Center	A backup communications center is funded and will be installed at the Gunnison Municipal building.	All of Gunnison and Hinsdale County	Communication/ 911 Board	High	
Gunnison/ Hinsdale Weed Control	Control over foreign and excessive weeds in our county	All of Hinsdale County	The State of Colorado gave Hinsdale County the authority to enforce the Colorado Weed Act. Other enforcers include United States Forest Service, and the Hinsdale National Forest.	High	

Jubilee House/Secure Location	Designed to give a safe shelter to abused, and assaulted men, women and children.	All of Hinsdale County	Police Department, and Law Enforcement Advocates.	High	
Building Codes	Designed to ensure structural stability in all weather conditions.	All of Hinsdale County	Community Development Building Inspector	High	

Emergency Generators	Hinsdale County has portable emergency generators to be brought into service on a 12 hour notice. There are no existing generators located in Government buildings etc.	Water treatment and sewer plant in Lake City and the Hinsdale County Road & Bridge shop.	Hinsdale County	Low	
Crime Stoppers/DARE	Prevention of criminal activity and drug activity	All of Hinsdale County	Sheriff's Office	Medium	
USDA/Brand Inspector	Inspections and control of livestock and ownership	All of Hinsdale County	USDA	High	

Public Health Department	Water quality, Disease control, unwanted pregnancy control, & cancer prevention	All of Hinsdale County	State of Colorado	High	

Chapter VII: Action Plan and Implementation Schedule

Potential Mitigation Strategies

The action plan was developed by analyzing the existing county programs, the proposed improvements and changes to these programs. Additional programs were also identified as potential mitigation strategies. These potential mitigation strategies were ranked in five categories according to how they accomplished each item.

-Prevention
-Property Protection
-Structural Protection
-Emergency Services
-Public Information and Involvement

Prevention measures: include planning, zoning, open space preservation, flood plain and wetland

development regulations, storm water management, best management practices, communication systems with rail companies, communication with land owners regarding hazardous materials.

Property Protection includes: utility relocation/burying or flood proofing, lightning protection for elevated structures, identifying all water sources in recreational facilities, sewer backup protection, insurance and minimization actions.

Structural Protection includes: placement of anemometers, evacuation plans for each building, enclosing hazardous facilities, detention/retention basins, larger culverts and higher flood standards for construction projects.

Emergency Services include: mutual aid agreements, protection of critical facilities, health and safety maintenance, inventory of all assets in the county.

Public Information and Involvement measures include: providing map information, informational mailings or workshops, real estate disclosure of flood hazards, environmental education, and public announcements on Cable Access channel which provides instantaneous updates on emergency situations in the county.

Table 5: Potential Mitigation Strategies

Hazard	Prevention	Property Protection	Structural Protection	Emergency Services	Public Information and Involvement

Bomb Threat	Evacuation plan for schools, Government buildings etc.	Evacuation routes designated for safe and non destructive action.	Hinsdale Fire department controlling structure damage.	Designate what departments are responsible for action	Public education on evacuation and regular drills
Flooding	Early identification of failing culverts, bridges, extreme high water levels.	development of culverts an bridges engineered not to effect homes, buildings or the property they are built on.	Require all culvert replacement and other road projects to be conducted in accordance with state and national standards.	Know which routes would potentially be blocked in various flood events and plan accordingly.	Educate community about potentially flooded routes and encourage to avoid those in storm events. Use Emergency Alerting System.

Fires	Evacuation plan for all involved. Identify nearest water source.	Coordination among Hinsdale fire department, all other involved agencies, and the public.	Determine the stability and the capacity of structures (if any) at the locations and make appropriate upgrades.	Designate what departments are responsible for action.	Public education of safety and procedures. Imply the do's and the dont's.
Ice & Snow Events	Plan for all disasters while incorporating evacuation, property and structural damage.	Coordination plan for all emergency services to protect all involved property and rebuilding after destruction.	Determine the stability and the capacity of structures and make appropriate upgrades.	Designate what departments are responsible for action.	Public education on safety and procedures in order to prepare for disasters.

Mud slides	Monitoring weather and ground moisture throughout the year and making adjustments to any activity that may be involved in a mudslide or the cause.	State and federal equipment available if needed and trained operators to protect any destruction of any property.	Determine the potential damage and make adjustments to protect structures from damage.	Coordinate emergency services to keep emergency vehicles out of the hazard zone and structure for any recoveries and incorporate denied access.	Provide public information on procedures and the what if's.
Earthquake		Building Codes	Building codes	Incident Command and possible triage with an organized emergency service crew with acceptable responsiveness.	Education on public safety and steps to be taken as a citizen in time of an earthquake.

Power Outages	Back up sources of electricity	proper underground electrical system.	Building codes, inspection of wiring within structures.	Electric companies identified and included in emergency plans.	Public education about electrical hazards.
Technological hazards	Hinsdale relies on Gunnison for hazmat team. Department of justice funds to equip our hazmat, law enforcement, fire, and EMS departments.	School chemical inspections	Inspections of schools, and households.	Inter communication and relations practicing organized skills and procedures at hazmat training's, the School bus safety program, and other disaster training's.	Newspaper articles educating the public on awareness.

Transportation Accidents	Enforced speed and driving under the influence laws, road maintenance, defensive driving courses and education.	Guard rails, fences, and safe placement of landscape.	Inspection of structures and the stability of structures.	Organized responsiveness by emergency services and additional extrication assistance if needed. Good communication between emergency dispatch and emergency services.	Driving education for the public as well as safe and defensive driving education.
Terrorist Activity	Additional Law Enforcement patrol and restricted areas.	Early Identification of all available resources and services that could be needed or involved.	Early identification of all available resources. Building codes and inspection of stabilization of any structures involved.	Identify responsibilities of each department and response to terrorist activity with safe activity.	Education for the public through cable TV reader board, radio, newspaper, and public meetings.

Other mitigation measures are practiced in Hinsdale:

Flooding: Water and snow levels are monitored prior to spring thaw. Those levels are reviewed and if it is determined we may be in for high water with the spring run-off the following steps are taken -

1. Public Awareness
2. Evaluation on water ways to see where those trouble spots may be so they may be fixed or planned for. Special attention to those spots with history of problems.
3. Ensure the storage of adequate numbers of sand bags.
4. Ensure evacuation points are ready and stocked with MRE.'s (meals ready to eat)
5. Alert property owners to the need of flood insurance in advance.
6. Alert private property owners of need for safe storage of valuables, stocking up on necessities, notification lists, etc.
7. Activate water monitors to call in levels.

Wildfires: Extreme drought conditions monitored and the following steps taken:

1. Alerts to both private and public entities.
2. Literature on clear spaces and other protective measures.
3. Burn Bans.
4. Wildfire orientation meetings with all assisting agencies with resources checked.

Terrorism:

Checking daily threat levels with COEM (Colorado Office of Emergency Management)

1. Sharing those threat levels with other government officials and law enforcement.
2. Check on Events planned.
3. Reminders to report suspicious activities.
4. Regional exercises with adjoining counties.

Chapter VIII: Feasibility and Prioritization of Proposed Mitigation Strategies

The goal of each strategy is reduction or prevention of damage from a hazard event. In order to determine their effectiveness in accomplishing this goal, a set of criteria was applied to each proposed strategy. The STAPLEE method analyzes the Social, Technical, Administrative, Political, Legal, Economic and Environmental aspects of a project and is commonly used by public administration officials and planners for making planning decisions. The following questions were asked about the proposed mitigation strategies and discussed in Table 6:

-**Social**: Is the proposed strategy socially acceptable to the community? Are there equity

issues involved that would mean that one segment of the community is treated unfairly?

-**Technical**: Will the proposed strategy work? Will it create more problems than it solves?

-**Administrative**: Can the community implement the strategy? Is there someone to coordinate and lead the effort?

-**Political**: Is the strategy politically acceptable? Is there public support both to implement and to maintain the project?

-**Legal**: Is the community authorized to implement the proposed strategy? Is there a clear legal basis or precedent for this activity?

-**Economic**: What are the costs and benefits of this strategy? Does the cost seem reasonable for the size of the problem and the likely benefits?

-**Environmental**: How will the strategy impact the environment? Will the strategy need environmental regulatory approvals?

*Each proposed mitigation strategy was evaluated and assigned a score(Good=3, Average=2, Poor=1) based on the above criteria. An evaluation chart with total scores for each strategy can be found in the collection of individual tables under Table 6.

Table 6: STAPLEE Analyses of Proposed Mitigation Strategies

Mitigation Action: Terrorism preparation

Criteria	Evaluation	Score

Is it Socially acceptable?	For the most part yes. There are some elements within the community who distrust anything government tries to do however most of the community is in favor of preparation.	2
Is it Technically feasible and potentially successful?	Yes, it is feasible, and would work.	2
Is it Administratively workable?	Yes, Emergency services would be responsible for Administrative involvement.	3

Is it Politically acceptable?	Yes	2
Is there Legal authority to implement?	Yes	3
Is it Economically beneficial?	Yes	2
Is it Environmentally beneficial?	Could be depending on the terrorist act	1

Final Score		15

Mitigation Action: Wildfire prevention, and preparation for wildfires

Criteria	**Evaluation**	**Score**
Is it Socially acceptable?	Yes, it benefits everyone equally.	2

Is it Technically feasible and potentially successful?	Yes, The plan works to identify actions necessary to plan for wildfires, destruction resulting from wildfires, which are common in Hinsdale County.	3
Is it Administratively workable?	Yes, This plan is structured, organized, and updated by the Hinsdale Wildfire Planning Group. This administration directly involves the State and National Forest Service, Law Enforcement, Fire districts, Fire Chiefs, Emergency management and planning, and elected officials.	3
Is it Politically acceptable?	Yes	2

Is there Legal authority to implement?	Yes, Under Colorado Law, the county Sheriff has been given authority to act as fire warden for the county. Federal fire agencies also have authority in addition to the Sheriff.	3
Is it Economically beneficial?	Yes, the funds used for the wildfire prevention and preparation come out of the Hinsdale County Emergency funds. If Presidential declaration occurs, funds could be excepted out of FEMA.	2
Is it Environmentally beneficial?	Yes, actions such as controlled burns, monitoring moisture, and observation of precipitation. Also replanting and recovering areas are popular.	3

Final Score		18

Mitigation Action: Flooding preparation and awareness

Criteria	Evaluation	Score
Is it Socially acceptable?	Yes, it benefits everyone equally.	2

Is it Technically feasible and potentially successful?	Yes, it will ensure protection and preparation for a flood in Hinsdale county.	2
Is it Administratively workable?	Yes	2
Is it Politically acceptable?	Yes	2
Is there Legal authority to implement?	No	1

Is it Economically beneficial?	Yes	2
Is it Environmentally beneficial?	Yes	2
Final Score		13

Mitigation Action: Preparation for airplane crashes.

Criteria	**Evaluation**	**Score**

Is it Socially acceptable?	Yes.	2
Is it Technically feasible and potentially successful?	Yes.	3
Is it Administratively workable?	Yes	2
Is it politically acceptable?	Yes	2

Is there Legal authority to implement?	Yes	2
Is it Economically beneficial?	No	1
Is it Environmentally beneficial?	No	1
Final Score		13

Mitigation Action: Preparation for extreme winter weather.

Criteria	Evaluation	Score
Is it Socially acceptable?	Yes	3
Is it Technically feasible and potentially successful?	Yes	3
Is it Administratively workable?	Yes	2

Is it Politically acceptable?	Yes	2
Is there Legal authority to implement?	No	1
Is it Economically beneficial?	Yes	2
Is it Environmentally beneficial?	No	2

Final Score		15

Mitigation Action: Emergency Operations Center

Criteria	Evaluation	Score
Is it Socially acceptable?	Yes	3
Is it Technically feasible and potentially successful?	Yes	3

Is it Administratively workable?	Yes	3
Is it Politically acceptable?	Yes	2
Is there Legal authority to implement?	Yes	3
Is it Economically beneficial?	Yes	3

Is it Environmentally beneficial?	No, there are no environmental impacts.	2
Final Score		19

Mitigation Action: Mobile incident command trailer

Criteria	Evaluation	Score
Is it Socially acceptable?	Yes, this benefits all sections of the community, and actually works to reach out to those that may not have access to a phone, television and are in remote areas.	3
Is it Technically feasible and potentially successful?	Yes, there is currently a Mobile incident command trailer. It has been put to use and has been successful.	3

Is it Administratively workable?	Yes	3
Is it Politically acceptable?	Yes	2
Is there Legal authority to implement?	Yes	3
Is it Economically beneficial?	Yes	3

Is it Environmentally beneficial?	No, there are no environmental impacts.	1
Final Score		18

Mitigation Action: Mobile Incident Command Post

Criteria	**Evaluation**	**Score**
Is it Socially acceptable?	Yes	2

Is it Technically feasible and potentially successful?	Yes	3
Is it Administratively workable?	Yes	3
Is it Politically acceptable?	Yes	2
Is there Legal authority to implement?	Yes	2

Is it Economically beneficial?	Yes	2
Is it Environmentally beneficial?	No environmental impacts	1
Final Score		15

Mitigation Action: Mutual Aid Agreements

Criteria	Evaluation	Score
Is it Socially acceptable?	Yes, it benefits everyone equally.	3
Is it Technically feasible and potentially successful?	There are mutual aid agreements currently in the Region. Terrorism should be addressed.	3
Is it Administratively workable?	Yes	3

Is it Politically acceptable?	Yes	3
Is there Legal authority to implement?	Yes, the agencies involved implement and structure their agreements.	3
Is it Economically beneficial?	Yes	3
Is it Environmentally beneficial?	No environmental impacts	1

Final Score		19

Mitigation Action: Evacuation Plan for Hinsdale County

Criteria	**Evaluation**	**Score**
Is it Socially acceptable?	Yes, It benefits everyone equally.	3

Is it Technically feasible and potentially successful?	Yes, this plan proposes a safe evacuation route from Hinsdale and eliminate future problems with traffic jams, roads issues, etc.	3
Is it Administratively workable?	Yes	3
Is it Politically acceptable?	Yes	2

Is there Legal authority to implement?	Yes, Emergency management has the authority.	3
Is it Economically beneficial?	Yes, the costs are mostly covered by pre-approved grants and the benefit is a safe evacuation plan in case of a severe emergency.	3
Is it Environmentally beneficial?	There are no environmental impacts.	1

Final Score		18

Mitigation Action: Regional Hazmat Response

Criteria	Evaluation	Score
Is it Socially Acceptable?	Yes, it benefits everyone equally	3

Is it Technically feasible and potentially successful?	Yes	3
Is it Administratively workable?	Yes	3
Is it Politically acceptable?	Yes	3
Is there Legal authority to implement?	Yes, the Gunnison Hazmat team operates under NFPA and OSHA standards, and rules created by EPA.	3

Is it Economically beneficial?	Yes	2
Is it Environmentally beneficial?	Yes	3
Final Score		20

Chapter IX: Implementation Schedule for Priority Mitigation Strategies

This step involves developing an action plan that outlines who is responsible for implementing each of the prioritized strategies determined in the previous step, as well as when and how the actions will be implemented. The following questions were asked to develop an implementation schedule for the identified priority mitigation strategies.

Who? Who will lead the implementation efforts? Who will put together funding requests and applications?

When? When will these actions be implemented, and in what order?

How? How will the community fund these projects? How will the community implement these projects? What resources will be needed to implement these projects?

Table 7 is the Action Plan. In addition to the prioritized mitigation projects, Table 7 includes the responsible party (WHO), how the project will be supported (HOW), and what the time frame is for implementation of the project (WHEN).

Table 7: Prioritized Mitigation Projects and Action plan

Project	Responsibility/ Oversight	Funding/Support	Time-frame
Terrorism preparation	Emergency Management	FEMA grants, DOJ grants, State, and local.	Ongoing, updated by 2004

Wildfire Prevention, and preparation for Wildfires	Emergency Management	Local, State, Hinsdale was one of the counties that received funding from the presidential declaration on wild fires, in 2002.	Ongoing, updated by 2004
Flooding preparation and awareness	Emergency Management, County Manager	Local, State	Ongoing, updated by 2004
Preparation for airplane crashes.	Emergency Management, FAA, Airport Manager	FEMA grants, State, Local,	Ongoing, updated by 2004

Preparation for extreme winter weather	Emergency Management	FEMA grants, Local,	Implemented by 2004
Emergency Operations Center	Emergency Management	State, Local,	Ongoing, updated by 2004
Command Trailer and Command Post	Sheriff	State. Local	Updated 2003
Mutual Aid Agreements	Emergency Management	State, Local	Will be implemented by 2004, updated and reviewed yearly.

Evacuation Plan for Hinsdale County	Emergency Management	Local	Presently implemented, reviewed and updated yearly
Regional Hazmat response	Emergency Management, Fire Marshall	Adjoining county funds	Will be in effect by 2004

Chapter X: Monitoring, Evaluating, and Updating the Plan

Recognizing that many mitigation projects are ongoing, and that while in the implementation stage communities may suffer budget cuts, experience staff turnover, or projects may fail altogether, a good plan needs to provide for periodic monitoring and evaluation of it's successes and failures and allow for updates of the Plan where necessary.

In order to track progress and update the Mitigation Strategies identified in the Action Plan (Table 7), it is recommended that the county revisit the Hinsdale County Hazard Mitigation plan annually, or after a hazard event. The Emergency Management Director/Coordinator is responsible for initiating this review and needs to consult with members of the Emergency Management Team. Changes should be made to the plan to accommodate for projects that have failed or are not considered feasible after a review for their consistency with STAPLEE, the time frame, the community's priorities, and funding resources. Priorities that were not ranked high, but identified as potential mitigation strategies, should be reviewed as well during the monitoring and update of this plan to determine feasibility of future implementation. In keeping with the process of adopting the

Hinsdale County Hazard Mitigation Plan, a public hearing to receive public comment on plan maintenance and updating should be held during the annual review period, and the final product adopted by the Board of selectmen appropriately.

Chapter XI: Recommendations

The following recommendations have been provided to assist Hinsdale County in adopting additional mitigation strategies.

Recommendations are recorded quarterly from the LEPC (Local Emergency Planning Committee). Some recommendations associated with the following plans and actions include mapping, radios, computers, EAS(Emergency Alerting System), system/TV, EPN(Emergency Preparedness Network), from all members of LEPC. Authorized by State guidelines, FEMA guidelines, and involved entities.

A. Evacuation plans
   1. Evacuation plan for Hinsdale County
   2. Evacuation for floods, fires etc.

B. Man-made Disasters
   1. Terrorism Preparation
   2. Wildfire

C. Combined Agency Operations
   1. Emergency Operations Center
   2. Mobile Incident Command Vehicle
   3. Mutual Aid agreements

D. Natural Hazards
   1. Preparation for extreme winter weather, wildfires, and floods.

BIBLIOGRAPHY:

These Resources were Referenced in the Preparation of This Plan

Colorado Office of Emergency Management

Colorado Incident Command System

Hinsdale County Emergency Plan

Hinsdale County Wildfire Mitigation Plan

Colorado Division of Water Resources

FEMA Flood plain Mapping

Hinsdale County GIS

US Army Corps of Engineers

Colorado State Forest Service

US Bureau of Land Management

Colorado Department of Public Health

Town of Lake City, Colorado

Appendix A

Hazard Definitions

A. Flooding

Flooding is a temporary overflow of water onto lands not normally covered by water producing measurable property damage or forcing evacuation of people and vital resources. Floods frequently cause loss of life; property damage and destruction; damage and disruption of communications, transportation, electric service, and community services; crop and livestock damage and loss and interruption of business. Hazards of fire, health and transportation accidents, and contamination of water supplies are likely effects of flooding situations.

*There are several types of hazards that are related to flooding:

1. 100-year Flood plain events

Properties within the 100-year Flood plain (the area inundated by a 100-year flood) are at a great risk during a natural disaster or event related to flooding. Steep topography and restricted riparian basin areas preclude large flood plains.

The areas that are most susceptible to the 100-year flood in Hinsdale County are depicted in Maps on file in Hinsdale County Courthouse. The structures that are located within this area are at a greater risk than structures located upland of these areas. However, even people who do not live near water are susceptible to flooding. A few homes have had water in basements and yards over the past several years.

2. Debris-impacted Infrastructure

Debris carried by floodgates can significantly compromise the effectiveness of otherwise adequately designed bridges, dams, culverts, diverting structures, etc. Storm debris, and structures such as poorly designed snowmobile bridges, carried by floodgates, may exacerbate a given flooding hazard by becoming obstructions to normal storm water flow.

All bridges, culverts and related roadways are vulnerable to this kind of hazard in Hinsdale County.

3. Landslides

A landslide is the downward or outward movement of slope forming materials reacting under the force of gravity including; med flies, mudslide, debris flows, rockslide, debris avalanches, debris slides and earth flows. Landslides may be formed when a layer of soil atop a slope becomes saturated by significant precipitation and slides along a more cohesive layer of soil or rock. Areas of particular landslide hazards are found where steep hillsides intersect thin, permeable layers of earth that overlay impermeable (dense, silty, or clayey) sediment. These areas are commonly adjacent to old riverbed or lakebeds. Stream bank erosion may also eventually result in landslides.

Much of the development in Hinsdale County is along rivers or in these particularly sensitive areas, making landslide events more likely. A variety of residential and commercial development has occurred along the streams, lakes, ponds and waterways and water bodies in

Hinsdale County, which can lead to landslides and/ or erosion of banks.

4. Rapid Snow Pack Melt

The climate, mountainous terrain and river watersheds are susceptible to flooding which may be accelerated by moderate temperatures and moderate to heavy rains leading to seasonal rapid melting of snow pack. The upland areas may be exposed to flash flood incidents with associated erosion and deposition issues in, or near streambeds. Lower lying areas may experience either flash flooding or inundation events accelerated by the rapid melting of the snow pack.

Structures and improvements located on, along, or at the base of steep slopes are most vulnerable, as are structures in the 100-year and 500-year flood plains.

5. River Ice Jams

Ice forming in riverbed and against structures presents significant hazardous conditions. Storm waters encounter these ice formations, which may create temporary dams. These dams may create flooding conditions where none previously existed (as a consequence of evaluation in relation to normal flood plains). Additionally, the impact of the ice itself on structures, which may not be designed for such impacts.

Bridges, culverts, and related roadways, such as identified in the Critical Facilities Database and Map 4 are most vulnerable.

6. Dam Breach and Failure

Dams function to serve the needs of flood control, recreation, and wildlife enhancement and water resources management. During severe weather events, such as a flood, a dam=s ability to serve as a flood control mechanism may be challenged and could breach or fail. In this event, anything downstream of a dam is in danger.

Hinsdale County has four dams. These dams have an existing threat to Hinsdale County.

B. Wind

The following kinds of hazards are related to wind:

1. Tornadoes

A tornado is a violent windstorm characterized by a twisting, funnel shaped cloud. These events are spawned by thunderstorms and, occasionally by hurricanes, and may occur singularly or in multiples. They develop when cool air overrides a layer of warm air, causing the warm air to rise rapidly. Most vortices remain suspended in the atmosphere. Should they touch down, they become a force of destruction.

The risk of tornadoes is low in Hinsdale County.

2. Down bursts

A downburst is a severe localized wind blasting down from a thunderstorm. These Astraight-line≅ winds are distinguishable from tornadic activity by the pattern of destruction and debris. Depending on the size and location of these events, the destruction to property may be devastating. Down bursts fall into two categories. Microbursts cover an area less than 2.5 miles in diameter, and Micro bursts cover an area at least 2.5 miles in diameter.

3. Lightning

During the development of a thunderstorm, the rapidly rising air within the cloud, combined with the movement of the precipitation within the cloud, causes electrical charges to build up within the cloud. Generally, positive charges build up near the top of the cloud, while negative charges build up near the bottom. Normally, the earth=s surface has a slight negative charge. However, as the negative charges build up near the base of the cloud, the ground beneath the cloud and the area surrounding the cloud becomes positively charged. As the cloud moves, these induce positive charges on the ground follow the cloud like a shadow. Lightning is a giant spark of electricity that occurs between the positive and negative charges within the atmosphere or between the positive and negative charges. However, when the potential between the positive and negative charges becomes too great, there is a discharge of electricity that we know as lightning.

All areas of Hinsdale County are potentially at risk for property damage and loss of life due to lightning. Areas that are heavily wooded as well as areas with large open spaces, which are susceptible to damage due to lightning strikes, have been identified as areas of concern on Maps on file in Hinsdale Court House.

C. Wildfire

The following kinds of hazards have been identified related to wildfire:

1. Forest Fires and Grass Fires

It is possible to have a forest fire in Hinsdale County that would affect the safety and welfare of residents in communities such as Lake City, Debs, Cathedral, and Capitol City. We also have several other locations here subdivisions have been built and are becoming increasingly populated because of growth. Also of concern are subdivisions like County Road 30, Rio Grande Reservoir Road and Ptarmigan Meadows. Our forests are over 100 years old and contain many down and rotten trees.

It is just as likely to have a grass fire in Hinsdale County that would affect the safety and welfare of residents in Hinsdale County. With the drought and poor water run off, and light winters, Hinsdale County is even more susceptible than in a normal year.

D. Ice and Snow Events

The following kinds of hazards are related to ice and snow:

1. Heavy Snow Storms

A winter storm can range from moderate snow to blizzard conditions. 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. According to the official definition given in 1958 by the U.S. Weather Bureau, the winds must exceed 35 miles per hour and the temperature must drop to 20 degrees F (-7 degrees C) or lower. All winter storms make walking and driving extremely dangerous.

All areas of Hinsdale County are susceptible to heavy snowstorms.

2. Blizzards

A blizzard is a snowstorm with sustained winds of 40 miles per hour (mph) or more or gusting up to at least 50 mph with heavy falling or blowing snow, persisting for one hour or more, temperatures of ten degrees Fahrenheit or colder and potentially life-threatening traveling conditions. The definition includes the conditions under which dry snow, which has previously fallen, is whipped into the air and creates a diminution of visual range. Such conditions, when extreme enough are called Awhite outs≅.

All areas of Hinsdale County are potentially at risk for property damage and loss of life due to blizzards.

3. 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 and to produce widespread power outages. Ice storms also create treacherous conditions for highway travel and aviation. Debris impacted roads from fallen trees or overhead wires that snapped under the weight of the ice make emergency access, repair and cleanup extremely difficult.

All areas of Hinsdale County are potentially at risk for property damage and loss of life due to ice storms.

E. Earthquake

An earthquake is a sudden 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 and phone lines, and often cause landslides, flash floods, fires, avalanches, and tsunamis. 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.

Generally, Hinsdale County lies in a zone of moderate seismic vulnerability.

F. Terrorism

Terrorism is the use of force or violence against persons or property in violation of the criminal laws of the United States for purposes of intimidation, coercion or ransom. Terrorists often use threats to create fear among the public, to try to convince citizens that their government is powerless to prevent terrorism, and to get immediate publicity for their causes. Different types of terrorist weapons include explosives, kidnaps, hijacks, arson, shootings, and NBC=s (nuclear, biological agents, and chemicals). Domestic terrorism involves groups or individuals whose terrorist activities are directed at elements of our government or population without foreign direction. International terrorism involves groups or individuals whose terrorist activities are foreign-based and/or directed by countries or groups outside the United States.

Appendix B

Resources

1. Agencies

Colorado Office of Emergency Management (970) 273-1622

Federal Emergency management Agency (FEMA) (303) 919-2439

Colorado Regional planners:
(*for a complete list go to www.dola.state.co.us***)**

Southeast Region: Cindy Mohat	(719) 544-6533
Inter Mountain Region: Bob Wold	(303) 273-1778
North West Region: Steve Denney	(970) 248-7308
North East Region: Kevin Kuretich	(970-679-4503
South West: Patricia Gavelda	(970) 247-7674

24-32-2109 - LOCAL DISASTER EMERGENCIES

1) A local disaster may be declared only by the principal executive officer of a political subdivision.
It shall not be continued or renewed for a period in excess of seven days except by or with the consent of the governing board of the political subdivision. Any order or proclamation declaring, continuing, or terminating a local disaster emergency shall be given prompt and general publicity and shall be filed promptly with the county clerk and recorder, city clerk, or other authorized record-keeping agency and with the division.

2) The effect of a declaration of a local disaster emergency is to activate the response and recovery aspects of any and all applicable local and interjurisdictional disaster emergency plans and to authorize the furnishing of aid and assistance under such plans.

3) No interjurisdictional disaster agency or official thereof may declare a local disaster emergency unless expressly authorized by the agreement pursuant to which the agency functions. An interjurisdictional disaster agency shall provide aid and services in accordance with the agreement pursuant to which it functions.

Source: L.92: Entire part added, p. 1022, $5, effective March 12.

Am. Jur.2d. See 53A AM.Jur.2d, Military and Civil Defense, $$ 447-449

Revised May 7, 2003

ADMINISTRATIVE CHAIN OF COMMAND FOR HINSDALE COUNTY

SHERIFF	**970-944-2291**
Emergency Mgr	**970-944-2639**
County Commissioners	**970-944-2225**

COUNTY CONTACT LIST

Chairperson: Carol Drake	**970-944-2369**
Commissioner: Linda Matthews	**970-944-2483**
Commissioner: Flynn Mangum	**970-641-2514**
County Manager: Ray Blaum	**970-944-0551**
Sheriff: William B. Denison	**970-944-0269**
Coordinator: Jerry Gray	**970-944-2639**
County Clerk: Linda Ragle	**970-944-2423**
County Treasurer: Kerry Carl	**970-944-2357**
County Assessor: Amy Wilcox	**970-944-2355**
County Attorney: Chuck Cliggett	**970-641-1154**
Road Supervisor: Robert Hurd	**970-944-2684**
Fire Chief: Ed Nettleton	**970-944-2466**
Public Health Nurse: Candy Bebee	**970-944-2033**
School Superintendent: Karen Thormalen	**970-944-1480**

LAKE CITY CONTACT LIST

SHERIFF: WILLIAM B. DENISON	**970-944-2291**
EMERGENCY MGR: JERRY GRAY	**970-944-2639**
MAYOR: JOE MARSHALL	**970-944-2475**
MAYOR PRO TEM: LARRY IAMS	**970-944-0250**
TRUSTEE: SANDY SCHAFER	**970-944-0343**
TRUSTEE: MARY NETTLETON	**970-944-2466**
TRUSTEE: HENRY WOODS	**970-944-2362**
TRUSTEE: ROGER VONRIESEN	**970-944-7647**
TRUSTEE: LAURIE VIERHELLER	**970-944-2701**
TOWN MANAGER: MICHELLE PIERCE	**970-944-2512**
PUBLIC WORKS: JAY DOTZENKO	**970-944-0141**
FIRE CHIEF: ED NETTLETON	**970-944-2466**

SITUATIONS **Rev. May 13, 2003**

MASS CASUALTY

1. **NOTIFY APPROPRIATE AMBULANCE**
2. **NOTIFY APPROPRIATE LAW ENFORCEMENT**
3. **NOTIFY FIRE DEPARTMENT**
4. **NOTIFY EMERGENCY SERVICES COORDINATOR**

AIRPLANE CRASH or MASS CASUALTY (REMOTE AREA)

1. **APPROPRIATE LAW ENFORCEMENT, i.e. Sheriff or CSP**
2. **SEARCH & RESCUE**

3. EMERGENCY SERVICE COORDINATOR
4. AMBULANCE/ HOSPITAL
6. FIRE DEPT.

FLOOD
1. APPROPRIATE LAW ENFORCEMENT
2. EMERGENCY SERVICE COORDINATOR
3. HOSPITAL
4. PUBLIC WORKS either Town/County (depending on location)
5. ENVIRONMENTAL HEALTH

AVALANCHE
1. APPROPRIATE LAW ENFORCEMENT
2. SEARCH & RESCUE
3. HOSPITAL

If Incident requires evacuation refer to evacuation plan

TORNADO OR SEVERE STORM
1. APPROPRIATE LAW ENFORCEMENT
2. EMERGENCY SERVICES COORDINATOR (Jerry Gray)
3. LAW ENFORCEMENT IN PATH OF FUNNEL CLOUD
4. AMBULANCE/Clinic
5. SEARCH AND RESCUE
6. FIRE DEPT.
7. ENVIRONMENTAL HEALTH

FIRES (STRUCTURE)
1. NOTIFY FIRE DEPARTMENT
2. NOTIFY EMS
3. NOTIFY LAW ENFORCEMENT
3. NOTIFY AGENCY THAT OWNS OR CONTROLS LAND

FIRES (GRASS OR WILD LAND)
1. NOTIFY LAW ENFORCEMENT
2. NOTIFY FIRE DEPARTMENT
3. NOTIFY AGENCY THAT OWNS PROPERTY

HAZARDOUS MATERIALS
1. USE HAZMAT CHECKLIST FOR QUESTIONS OF REPORTING PARTY
   FOUND IN FILE FOLDER NAMED AHAZMAT NOTIFICATION
2. CONTACT DENNIS SPRITZER Gunnison HazMat
3. CONTACT Bill Dennison (SHERIFF)

5. IF NEEDED NOTIFY APPROPRIATE FIRE DEPARTMENT
6. IF NEEDED NOTIFY AMBULANCE/ CLINIC

7. NOTIFY EMERGENCY SERVICES COORDINATOR
8. REFER TO ANNEX Q OF EMERGENCY RESPONSE PLAN
9. ENVIRONMENTAL HEALTH

TERRORIST ACTIVITY
1. NOTIFY APPROPRIATE LAW ENFORCEMENT
2. NOTIFY FBI 24 HR NUMBER 303-629-7171
3. IF NEEDED APPROPRIATE FIRE DEPARTMENT
4. IF NEEDED NOTIFY AMBULANCE/CLINIIC
5. NOTIFY EMERGENCY SERVICES COORDINATOR
6. NOTIFY PUBLIC HEALTH

Contact Gunnison For Mass Casualty Trailer or ZUMRO Tent
Use Procedure in Mass Casualty File Folder

RESOURCES- Private Revised 21 April 2003

The initial call will come in to the dispatcher who will pass it on to Law Enforcement or Jerry Gray (970-944-2639, or page 923 through dispatcher).

One of these three people will go immediately to the dispatch office or EOC and call the following sections as needed:

1. Lake City Area Medical Center	Brian Barger	944-2331
2. Lake City Area Fire Protection	Mark Wingard	944-4211
3. Hinsdale County EMS	Jerry Grey	944-2639
4. Hinsdale County SAR	Sheriff	944-2291
5. Sheriff's Posse	Bill Denison	944-2291 or
6. Monarch Pass SAR	Lee Partch	641-1210 or 0044
	Pat MacIntosh	641-1883 or 8022
7. Western State Rescue	Cache	943-2095 pg 349-3145
8. Civil Air Patrol	Bill Stone	641-2429 or 2481
9. Lake City Fire Dept.	Ed Nettleton	911
10. Hinsdale HAZMAT	Dennis Spritzer	911
11. Ambulance	Jerry Gray	911
12. Guides and Outfitters	Rudy Rudibaugh	641-0666
	John Nelson	641-0063 or 2830
13. San Juan Forest Service	Larry Franke	719-658-2556
14. Helicopters	listed on page 6	
15. Rio Grande Forest	Larry Franke	719-658-2556
16. National Park Service Routine 641-2337; Emergency 641-2349		
17. US Forest Service/BLM	Jerry Chonka	641-0471 or 3401
18. Gunnison National Forest	Dan Carr	641-0471
19. Division of Wildlife	Jim Young	641-0088 or 6910
20. Gunnison Valley Hospital	Rob Austin	641-1456

21. Crested Butte EMS	Allen Bailey	911 or 349-5333
22. Mine Rescue	ARCO	970-929-5015
23. Mine Rescue	Bob Gydesen	641-2399 or 0500
24. Colorado State Patrol		249-4392
25. Heath Public School	Karen Thormalen	944-2314
26. American Red Cross	Arden Anderson	641-5322 or 1-888-545-7800
27. Public Health	Candy Bebee	944-0321
28. Environmental Health	RichBaumann	944-2225
29. BLM Law Enforcement	Jim Maloney	240-5330
30. BLM Fire Dispatch		249-1010

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RESOURCES B COUNTY

		Office	home	cell
Administration	Ray Blaum	944-2225	944-0551	
Assessor	Amy Wilcox	944-2224	944-2355	
Attorney	Chuck Cliggett	641-1154	641-1154	
Building Inspector	Richard Baumann	944-2225	944-2734	
Coroner	Ron Zeller	944-2321	944-2321	
County Clerk	Linda Ragel	944-2228	944-2423	
District Attorney	Geoffrey Nims	641-5138	641-4816	
Emergency Services Director	Jerry Gray	944-2639		
Environmental Health	Richard Stinson	641-5105	641-0719	
Fire Chief	Ed Nettleton	944-2466		
Finance	Sandy Schaefer	944-2225	944-0343	
Housing Coordinator	Shary Templeton	641-7901	641-6371	
Public Health	Candy Bebee	944-0321	944-2033	
Human Services	Rene Brown	641-3244		275-3640
Jail		641-1108		
Juvenile Diversion	Janet Reinman	641-4710		
Transfer Station	Robert Herd	944-2400	944-2684	
Library	Elaine Gray	944-2615	944-2639	
Literacy	Mary Burt	641-7684		
Motor Vehicle	Linda Ragle	944-2228	944-2423	
Personnel	Donna Kelly	944-2225	944-8018	
Planning	Ray Blaum	944-2225	944-0551	
Probation	Jackie Wheeler	641-0695		
Public Works	Jay Dotzenko	944-2333	944-0141	
Recording	Linda Ragol	944-2228	944-2423	
Sheriff	William Denison	944-2291		
Treasurer	Carrie Karl	944-2223	944-2357	
Veterans Officer	Don Craig	944-2225	970-856-8648	
Victims Service	Elaine Jerard	240-4481		
Water Treatment	Jay Dotzenko	944-2333	944-0141	
Weed District	Adena Greene	641-4393		

PUBLIC UTILITIES

	DAY	NIGHT
A. Lights and Power		
1. REA	641-3520	641-8000
B. Propane		
1. Amerigas	641-1571	
2. All Star Gas	641-1737	

C. Sewer/Water

1. Lake City	**944-2333**

D. Telephone

1. Century Tel	**1-800-824-2877**

Revised 21 April 2003

MILITARY ASSISTANCE

EMERGENCY MEDICAL EVACUATION

A. MAST helicopter unit from Ft. Carson, Colorado
   1. Emergency number 719-526-3822
   2. Routine number 719-526-3015

BOMB THREAT.....E.O.D....FT. CARSON..719-526-2643

STATE LEVEL

A. OEM Emergency 303-279-8855 Routine 303-273-1622
B. Colo. Search & Rescue Board Denver (303)443-1253 *
   * Coordinators rotate, this number will know current coordinator.

MILITARY ASSISTANCE FOR EQUIPMENT OR PERSONNEL

AFRCC Langley AFB, Va.(responsible for all inland search and rescue) at 1-800-851-3051
Ft. Carson EOC 719-526-5914 or 5915

MILITARY HELICOPTERS

A. Fort Carson SAR (719) 526-2222
B. Butts Airfield 719-526-3935
C. Jolly Green, Kirkland AFB (505) 844-2961
D. H.A.T.S. 970-524-7702

National Transportation Safety Board (303) 361-0600
10255 E. 25th Avenue, Suite 14
Aurora, Colorado 80010

E.O.C. (Emergency Operations Center)
Camp George West
Golden, Colorado 80401
Telephone: (303)279-8855

AFRCC (Air Force Rescue Coordination Center)
Langely, Va.
Telephone: 1-800-851-3051

Flight Service Station
Denver - overload goes to Casper, WY
Telephone: 1-800-992-7433

Private Helicopters -
Leonard Felix - Olathe -970-323-5580
DBS - Rifle - 1-800-805-8808
Mark Young - Montrose - 970-249-5339

Revised 21 April 2003

AMERICAN RED CROSS

For assistance in a disaster call:

1. **Western Colorado Chapter** **970-242-4851**
   Or toll free 1-888-545-7800
   Local Contact - Arden Anderson 641-5322
2. **Rio Grande Forest** **719-852-5706**
3. **Jo Ann Stone** **641-2481 or 641-8000**

During the initial emergency, Red Cross will be able to help with:

1. **Food**
2. **Clothing**
3. **Housing**
4. **Medical Care**
5. **Glasses**
6. **Dentures**
7. **Medicines (such as insulin, etc.)**

During the disaster they may ask assistance from another chapter by bringing a hot food truck (to feed people)

After the disaster they can assist with damage assessment.

Current Chapter: Western Colorado Chapter
American Red Cross
506 Hinsdale Avenue
Grand Junction, Co. 81501
1-888-545-7800

Public Information

		Business	Home
A.	Silver World	944-2515	
B.	Cable TV Reader Board		
C.	Radio Station KEJJ	641-4000	641-4564
D.	Radio Station KVLE	641-3400	641-4429
E.	Radio Station KJOY		

In most cases PIO will be County Manager – Ray Blaum – 944-2225

The responsibility of the Transportation Committee will be to provide transportation of needed personnel to the scene of a major disaster and to assist in transporting victims to emergency facilities.

The four sections of this committee include Improved Roads, Snow, 4-Wheelers, and Airborne.

The committee will meet at a designated area (in the event of a disaster) and be dispatched as needed. The committee will maintain a current resource list of personnel and equipment that may be used in a disaster situation.

The committee will elect a chairman for each section who will be responsible for submitting quarterly reports of any status changes to the county manager's office.

Key personnel for this committee:

Name	Bus.phone	home phone
IMPROVED ROADS – Robert Hurd	**944-2400**	
Hinsdale Ambulance	**911**	**944-2291**
Tom Trumble	**944-2314**	**944-2641**
Jim McDermott	**641-1852**	**641-2249**
Town & Country Autoplex	**641-0051**	
John Roberts Chevrolet	**641-0920**	
Alpine Express (Mike Potoker)	**641-5074**	**641-2478**
SNOW – Jeff Guthmiller		
Jeff Guthmiller	**944-2311**	**944-3311**
DOW- Bob Carochi	**641-0088**	**944-1007**
REA-Tom Carl	**641-3520**	**944-2357**
Civil Air Patrol-Snow Cat	**641-2481**	**641-2429**
Civil Air Patrol-Snowmobiles		
Monarch Pass SAR-Snowmobiles	**641-2481**	**641-2429**
Air Transportation	**Mike Vader**	**641-0526**

AIRBORNE B Mike Vader, CHAIRMAN

Matt Messner.....641-0526
Mike Vader.....641-0526

4-WHEEL DRIVES - KEN GLOVER, CHAIRMAN

Monarch Pass SAR.....641-2429; 641-1210; or Dispatch
WSR.....page 349-3145
4-Wheelers.....641-1386 OR 641-4444
Park Service.....641-2337or 641-2349
Forest Service.....641-0471 or 641-3401
Division of Wildlife.....641-0088 or 641-6910
Sheriff's Posse.....641-1113

Responsibilities:
The chairman will be responsible for submitting quarterly status reports to the Hinsdale Sheriff’s Office. Included in

reports should be designation of frequencies.

Purpose: To establish a communications network which will be immediately available in any actual emergency condition.

Scope: The Hinsdale County Sheriff is the agency that is in charge of emergency situations for Hinsdale County. This plan is to augment the normal law enforcement communication system.

Communications action plan:

A. Hinsdale Communications Center or The Emergency Services Coordinator (in the event of a mass emergency) will notify:

1. Hinsdale County Sheriff 944-2291
2. Jerry Gray 944-2806 944-2639

B. If necessary, the public will be notified by the use of the Public Communications (911 Reverse, EAS and Media).

C. Communications personnel and radios will be dispatched to the following locations:

1. Incident Command and/or EOC
2. Clinic
3. All other location deemed necessary

Note: On-scene communications will be the Sheriff's Office, Fire Department, and EMS.

D. Communications emergency operations center locations:

1. Primary site will be EOC, Hinsdale Sheriff's Office
2. Secondary site to be determined at a later time if the primary site is not available.

E. The communications committee will collect and maintain a list of call signs.

F. Frequency allocations:

Normal Use	Frequency	Disaster Use
CSP (3)	154.905	State Patrol/Hazmat
Hospital	155.340	Ambulance/Medical
Fire Department	154.280	FERN
CSP (1 & 2)	155.700	Law Enforcement
County Public Works	155.775	County
Sheriff's Office	159.345	Law Enforcement
NLEC	155.475	Mutual Aid

F. Frequency allocations (cont'd):

Normal Use	Frequency	Disaster Use
Search & Rescue	155.160	Searches

USNPS	Duplex 166.300/166.9	
	Simplex 166.300	
USFS	Duplex 164.125R/164.825T	tone 136.5 Bald Mtn. Black Mesa
	/	" 146.2 Hill 71 Lake City
		" 151.4 Reno Taylor
		" 156.7 Monarch Upper
	Simplex 164.9375	
DOW	Duplex 151.190/151.475	
	Simplex 151.190	
CAP	Duplex 143.900.148.150	
	Simplex 148.150	

GVARC	Duplex 147.720/147.120
	Simplex 147.120
C.B. Police Dept.	155.445
Colo. State Highway	151.265
Aircraft	123.1 (on actual missions only)
	122.9 (for practices)
UNICOM	122.70
Airlines	129.05
AWOS	135.075

Chairman for this committee will be Sheriff's Dept., 944-2291.

Revised 21 April 2003

WATER LEVEL MONITORING COMMITTEE

Responsibilities:

Committee will meet and elect a chairman who will be in

charge of submitting quarterly reports to the Hinsdale County Manager's Office. Monitors will submit water level readings to the dispatcher (641-8000) each morning by 7:30 a.m. OR if the water rises 6" or more in one hour OR when water reaches flood stage, during peak run-off season.

LOCATION	NAME	TELEPHONE
Lake Fork/Henson Creek/Cebolla	Carl Hurst	944-2315
Lake San Cristobal	Carl Hurst	944-2315
Continental Reservoir	Robert Kukuk	719-658-2221
Rito Hondo/Brown Lake/Hermit Lake	Brent Woodard	719-658-2928
Rio Grande Reservoir		
Williams Creek Reservoir		

EQUIPMENT COMMITTEE Rev. 21 April 2003

The responsibility of the Equipment Committee will be to maintain a current list of heavy equipment and operators that may be called in the event of a major disaster within Hinsdale County. The committee will be responsible for electing a chairman who will report any changes to personnel and equipment to the county manager on a quarterly basis.

PRIVATE OWNED HEAVY EQUIPMENT

A. HEAVY EQUIPMENT IN HINSDALE

1.	Robert Hurd	944-2400
2.	George Hurd	944-2400
3.	Stan Winnery	944-2448
4.	Gene Brown	944-2550

B.	WRECKERS	Day
1.	Tripple Cross Towing	275-2453
2.	Signal Peak Auto Salvage	641-5133

3.	H & H Towing	641-2628
4.	Sportsmans Texaco	944-2525

Chairman for this committee is Robert Hurd, 944-2400
Public Works Director Robert Hurd 944-2400

MANPOWER Rev. 21 April 2003

The Manpower Committee shall meet and elect a chairman. The responsibilities will be to select enough personnel to serve on this committee to provide manpower to help in a disaster situation within the county of Hinsdale.

This will include maintaining a list of people to help with evacuation of a major casualty accident (people should be equipped and dressed to fit the situation).

Helping to sandbag in case of flooding.

Helping with other committees that may be lacking such as Transportation, Rescue, etc.

The chairman of this committee will submit a quarterly status report to the Hinsdale County Sheriff’s Office. If no changes are made, the report may simply state, "No Changes", but would reflect that all personnel are still available.

If possible, injured people should be moved under the supervision of an EMT or some medical personnel.

Deceased may not be removed without the permission of the coroner.

Assemble at a designated spot and dispatch to the scene as needed (requested). (In cases of mass casualties, it would help if two people were dispatched to the Medical Center and two to Multi-Purpose Building or other triage center for the purpose of loading and unloading victims.)

	Business
Michelle Pierce	944-2333
Robert Hurd	944-2400
Karen Thormalen	944-2314

Chairman for this committee is Michelle Pierce.

HOUSING **Rev. 21 April 2003**

The responsibility of the chairman will be to submit a list of resources and personnel. A status report shall be submitted to the Sheriff's office each quarter.

The committee will be responsible to help provide housing and if the need arises care for minors in the event of a major disaster in Hinsdale County.

	Business	Home
Hinsdale County Public Health	944-0321	
Hinsdale County Human Services		
Renee Brown	641-3244	641-3948
American Red Cross	(970)242-4851	

MEDICAL **Confirmed 3/2002**

The Hinsdale Public Health Department will be responsible for maintaining a resource list of medically trained personnel in addition to the Lake City Medical Center staff.

The Lake City Area Medical Center will appoint a committee to be responsible for submitting a yearly status report to the Hinsdale County Public Health and Hinsdale County Manager's Office.

Lake City Area Medical Center 944-2331
Chairman for this committee is Brian Barger.

Disaster Plan for Lake City Area Medical Center

1. Triage on disaster scene by chief E.M.T. will determine which victim(s) will be sent to the clinic for minor care or to be stabilized while waiting for a helicopter; i.e. those in shock, with head injuries and or spinal injuries. People who have undergone trauma cardiac arrest should <u>not</u> be sent to the clinic.

2. Maximum patient candidates sent to the clinic include:
- **a. Critical, those in need of immediate care Three (3)**
- **b. Walking Wounded (able to walk in and out) Four (4)**
- **c. Delayed care will all go to Gunnison Valley Hospital or Montrose Memorial Hospital via ground ambulance.**

3. Victims requiring first aid only will be sent to another facility.

4. Victims requiring housing only will be sent to another facility.

5. Clinic personnel will not go to the scene as they are better utilized within the clinic.

6. All medical supplies and personnel whose destination is the clinic will be ordered and cancelled <u>only</u> by the clinic through the Incident Command Center.

As patients are stabilized and/or transferred out of the clinic, additional victims could be sent to await air transport.

Security personnel should be requested for Triage Center.

Approved:
Approved: Medical Staff,

COUNTY CONTACT LIST

Chairperson: Carol Drake	**970-944-2369**
Commissioner: Linda Matthews	**970-944-2483**
Commissioner: Flynn Mangum	**970-641-2514**
County Manager: Ray Blaum	**970-944-0551**
Sheriff: William B. Denison	**970-944-0269**
Coordinator: Jerry Gray	**970-944-2639**
County Clerk: Linda Ragle	**970-944-2423**
County Treasurer: Kerry Carl	**970-944-2357**
County Assessor: Amy Wilcox	**970-944-2355**
County Attorney: Chuck Cliggett	**970-641-1154**
Road Supervisor: Robert Hurd	**970-944-2684**
Fire Chief: Ed Nettleton	**970-944-2466**
Public Health Nurse: Candy Bebee	**970-944-2033**
School Superintendent: Karen Thormalen	**970-944-1480**

LAKE CITY CONTACT LIST

SHERIFF: WILLIAM B. DENISON	**970-944-2291**
EMERGENCY MGR: JERRY GRAY	**970-944-2639**
MAYOR: JOE MARSHALL	**970-944-2475**
MAYOR PRO TEM: LARRY IAMS	**970-944-0250**
TRUSTEE: SANDY SCHAFER	**970-944-0343**
TRUSTEE: MARY NETTLETON	**970-944-2466**
TRUSTEE: HENRY WOODS	**970-944-2362**
TRUSTEE: ROGER VONRIESEN	**970-944-7647**

TRUSTEE: LAURIE VIERHELLER	**970-944-2701**
TOWN MANAGER: MICHELLE PIERCE	**970-944-2512**
PUBLIC WORKS: JAY DOTZENKO	**970-944-0141**
FIRE CHIEF: ED NETTLETON	**970-944-2466**

Jo Ann Stone **200 E. Virginia, Gunnison**	**Emergency Services Coordinator** **641-2481 or page thru dispatch**
Jerry Chonka **216 N. Colorado, Gunnison**	**U.S. Forest Service** **B.641-0471 H. 641-3401**
Sheridan Steele **Elk Creek, Gunnison**	**National Park Service** **Routine 641-2337 Emergency 641-2349**
Jim Young **300 W. New York, Gunnison**	**Colorado Division of Wildlife** **B.641-0088 H.641-6910**
Mike Vader **1 Airport Rd.**	**Gunnison Valley Aviation** **641-0526 H, 641-5145**

Bill Stone **P.O. Box 66, Gunnison**	**Civil Air Patrol** **B.641-2429.2481 or dispatch**
The Shopper **307 N. Main, Gunnison**	**Information** **B.641-3148**
KEJJ Radio **120 N Main, Gunnison**	**Information** **B.641-4000**
KVLE Radio **1445 N. Hwy. 135, Gunnison**	**Information** **B.641-3225 641-4429**
Ron Zeller **Lake City, Hinsdale**	**Coroner** **B.944-2291 H.944-2321**
Jack Curtis **230 N. 11th, Gunnison**	**Transportation** **O. 641-7780**
Jim McDermott **507 N.Spruce, Gunnison**	**Transportation** **B.641-1852 H. 641-2249**
Town & Country Autoplex **212 W. Hwy. 50, Hinsdale**	**Transportation** **B.641-0051 H.641-2307**

Gunnison City Dispatcher **201 W. Virginia, Hinsdale**	**Communications**	**B.641-8000**
Gunnison Valley Hospital **214 E. Denver, Hinsdale**	**Medical** **641-1456**	
American Airlines **Gunnison County Airport**	**Transportation** **641-6348**	
American Red Cross **Western Colorado Chapter, Grand Junction, Colorado**	**970-242-4851 or 1-888-545-7800**	

COMMITTEE CHAIRPERSONS

Transportation (4-Wheel Drive)
Tom Trumble **W.944-2641**

Communications
Sheriff Denison **W.944-2291**

Water Level Monitors **W.944-2315**
Carl Hurst

Equipment
Robert Hurd **W.944-2400**

Manpower
Michelle Pierce **W.944-2333**

American Red Cross
Western Colorado Chapter **1-888-545-7800**

Transportation (Snow)
Jeff Guthmiller **W.944-2311**

Transportation (Air Section)
Mike Vader **641-0526 h. 641-5145**
1 Airport Road

Medical
Brian Barger **W.944-2331**

DISASTER PREPAREDNESS REPORT FORM revised 21 September, 2001

These status reports are to be submitted to Hinsdale County 311 N. Henson, Lake City, Colorado 81235, quarterly by each committee chairman and are due April 30, June 30, September 30, and December 31. The purpose is to keep a current resource list for the Hinsdale County Disaster Plan.

Committee_____

Chairman_____

Address _____

Telephone (work) _____(home)_____

Changes to Personnel_____

_____

_____

_____

_____

_____

Changes in equipment resources_____

_____

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_____

_____

_____

If additional space is needed, please use the reverse side.

CALL LIST FOR COUNTY ROAD EMERGENCIES

All Districts

Robert Hurd	**944-2400**
Office	
George Hurd	**944-2400**
Shop	
CDOT	**944-2536**

HAZARDOUS MATERIALS NOTIFICATION PLAN FOR DISPATCH

I. Upon notification of a Hazardous Materials Incident:

A. Get help for the dispatch office.

B. Notify one of the following persons, in sequence:

1. Dennis Spritzer

2. William Denison

3. State Patrol (Montrose) or call Dave Moody (state patrol Hazmat) 970-249-4392 or home. 970-434-9075 or Drew Reeke Grand Junction Fire Dept(hazmat) 244-1400

C. Notify law enforcement agency with jurisdiction.

D. Notify fire department with jurisdiction (if needed, page ambulance having jurisdiction).

E. Notify Hinsdale County Emergency Services Coordinator.

F. Notify Public Health

Colorado State Patrol is the authority for HAZMAT on the Highways and roads but the Designated Emergency Response Authority (DERA) for Hinsdale County is Sheriff William Denison. Sheriff Denison should be notified of any HAZMAT incident within the county. The local HAZMAT Team will respond to all local incidents, where they will Contain, Isolate and prevent admittance until such time as the Designated Responder arrives.

DEPARTMENT OF THE ARMY
94th Ordnance Detachment (EOD)
Forscom Field Operating Activity (DCSOPS)
Fort Carson, Colorado 80913
August 30, 1985

Gentlemen:

The 94th Ordnance Detachment (Explosive Ordnance Disposal) located at Fort Carson, Colorado is available to provide EOD support to any public safety agency in Colorado.

This support includes rendering safe and disposing of any military type ordnance or improvised explosive devices (homemade bombs) which present a threat to public safety.

We are prohibited by the Department of Defense from disposing of commercial type explosives or hazardous chemicals that do not pose an imminent danger to the public. We are, however, still available to respond to the incident site and provide technical assistance and advice.

We are also available to present classes on explosive ordnance recognition, explosive safety, bomb threat/bomb search procedures, and any other explosive related subject that you desire. These classes will be presented at no cost to you and on the date and location that you desire.

If we can be of any assistance to you whatsoever, please do not hesitate to call us. We have an EOD stand-by on duty 24 hours a day, 7 days a week. Our telephone number is (719) 526-4242 or 526-2643 (2643 is the 24 hour number). If unable to

contact the 94th Ordnance Detachment, call the 548th Ordnance Detachment (Explosive Ordnance Disposal Control Center), Ft. Lewis, Washington at (206) 967-1971.

Enclosure 1 is the information we need to schedule classes; requests should be made to the Commander, 548rd Ordnance Detachment (EODCC), Ft. Lewis, Washington in sufficient time (60 days) for a written response and scheduling; please send an information copy to the 94th Ordnance Detachment (EOD). Enclosure 2 is an EOD incident checklist.

Thank you for your time. I hope we can be of assistance to you and your agency.

Sincerely,
Karl E. Reinhard
1LT, OrdC

2 Encls.

The numbers listed above were corrected on 6/25/96. Ft. Carson 24 hour number (719) 526-2643, and the backup now is 548th Ord. Det. Ft. Lewis Washington (206)967-1971.

2. Website=s

Colorado Executive Department/All State Offices
(*Refer to www.state.co.us for state planners and services***)**

Us Department of the Interior
(*Refer to www.doi.gov for US agencies***)**

Natural Hazards Research Center, University of Colorado
(*www.colorado.edu/litbase/hazards/* **)**- searchable database of references and links to many disaster-related website=s.

Natural Emergency Management Association
(*http://nemaweb.org* **)**-Association of state emergency management directors; mitigation projects.

U.S. State and Local Gateway
(*http://www.statelocal.gov/* **)**-General information through the federal state partnership

National Weather Service
(*http://www,nws.noaa.gov/* **)**-Central page for National Weather Warnings, updated every 60 seconds.

FEMA, National Flood Insurance Program, Community Status Book
(*http://www.fema.gov/fema/csb.htm* **)**-Searchable site for access of community Status Book.

National Lightning Safety Institute
(*http://lightningsafety.com/* **)**-Information and listing of lightning safety publications.

Global Hydrology and Climate Center
(*http://www.ghcc.msfc.nasa.gov* **)**-A study of the global water cycle and its effects on the climate.

National Severe Storms Laboratory
(*http://www.nssl.noaa.gov/* **)**-Information about tracking severe storms.

USDA Forest Service Web
(*http://www.fs.fed.us/land/* **)**-Information on forest fires and land management.

Environmental Mapper
(*http://maps.epa.gov/enviromapper/* **)**-Site that allows you to view maps by locality, watershed, EPA region, etc.

Extreme Weather Source book
(*http://sciencepolicy.colorado.edu/sourcebook/* **)**-Economic and societal effects of hazards.

3. Mitigation Funding Sources

- **a.** Hazard Mitigation Grant Program (HMGP) through the Colorado Office of Emergency Management**.**
- **b.** Flood Mitigation Assistance Program (FMAP) through the Colorado Office of Emergency Management.
- **c.** FEMA Wildfire Management Program.
- **d.** Colorado State Forest Wildfire Management Program.
- **e.** Board of County Commissioners of Hinsdale County
- **f.** Colorado Water Conservation.

Appendix C
Summary of Hazard Mitigation Strategies

I. Flash Flood or Ice Jam Flooding Mitigation

A. Prevention

Prevention measures are intended to keep the problem from occurring in the first place, and/or keep it from getting worse. Future development should not increase flood damage. Building, zoning, planning, and/or code enforcement offices usually administer preventative measures.

1. Planning and Zoning

Land use plans are put in place to guide future development, recommending where- and where not-development should occur. Sensitive and vulnerable lands can be designated for uses that would not be incompatible with occasional flood events-such as parks or wildlife refugees. The zoning ordinance can regulate development in these sensitive areas by limiting or preventing some or all development-for example, by designating Flood plain overlay, conservation, or agricultural districts**.**

2. Open Space Preservation

Preserving open space is the best way to prevent flooding and flood damage. Open space preservation should not, however, be limited to the flood plain, since other areas within the watershed may contribute to controlling the runoff that exacerbates flooding. Land use and Capital Improvement

plans should identify areas to be preserved by acquisition and other means, such as purchasing easements. Aside fro outright purchase, open space can also be protected through maintenance agreements with landowners, or by requiring developers to dedicate land for flood flow, drainage and storage.

3. Flood plain Development regulations

Flood plain development regulations typically do not prohibit development in the special flood hazard area, but they do impose construction standards on what is built there. The intent is to protect roads and structures from flood damage and to prevent the development from aggravating the flood potential. Flood plain development regulations are generally incorporated into subdivision regulations, building codes, and Flood plain ordinances, which either stand-alone or are contained within a zoning ordinance.

B. Property protection

Property protection measures are used to modify buildings subject to flood damage, rather than to keep floodgates away. These may be less expensive to implement , as they are often carried out on a cost-sharing basis. In addition, many of these measures do not affect a building=s appearance or use, which makes them particularly suitable for historical sites and landmarks.

1. Relocation
2. Acquisition
3. Building Elevation
4. Flood proofing
5. Sewer Backup Protection
6. Insurance

C. Natural Resource Protection

1.Wetlands Protection

2. Erosion and Sedimentation control

D. Emergency Services

Emergency services protect people during and after a flood. Many communities in Colorado have emergency management programs in place, administered by an emergency management coordinator.

1. Flood Response

Flood response refers to actions that are designed to prevent or reduce damage or injury, once a flood threat is recognized. Such actions and the appropriate parties include:

- activating the emergency operations center (emergency coordinator)
- sandbagging designated areas (public works department)
- closing streets and bridges (law enforcement)
-shutting off power to threatened areas (public service)
-releasing children from school (school district)
-ordering an evacuation (selectmen/city council/emergency coordinator)
-ordering evacuation shelters (churches, schools, Red Cross, municipal facilities)

3. Critical facilities protection
4. Health and Safety maintenance

E. Structural Projects
1. Install new culverts, deepen channels

II. Drought

A. Preventive
1. Conservation of water
2. Dry landscaping with rocks, cactus plants, gravel etc.
3. Monitoring precipitation

B. Agriculture Protection
1. Coordinating irrigation schedule with ranch owners.
2. Cloud seeding
3. lowering herd numbers
4. Alternate pastures
5. Purchasing more water rights
6. Alternate feed purchases

C. Emergency Services
1. Drought plans are also taken into account for secondary problems, such as fires, and erosion.

III. Earthquakes

A. Preventive
1. Planning/zoning to keep critical facilities away from fault lines.
2. Planning, zoning and building codes to avoid areas below steep slopes or soils subject to liquefaction.
3. Building codes to prohibit loose masonry, overhangs, etc.

B. Property Protection
1. Acquire and clear hazard areas.
2. Retrofitting to add braces, remove overhangs.
3. Apply Mylar to windows and glass surfaces to protect from shattering glass.
4. Tie down major appliances, provide flexible utility connections.
5. Earthquake insurance riders.

C. Emergency Services
1. Earthquake response plans to account for secondary problems, such as fires and hazardous material spills.

D. Structural Projects

1. Slope stabilization

IV. Dam Failure

A. Preventive

1. Dam failure innundation maps.
2. Planning/zoning/open space preservation to keep area clear.
3. Building codes with flood elevation based on dam failure.
4. Dam safety inspections.
5. Draining the reservoir when conditions appear unsafe.

B. Property protection

1. Acquisition of buildings in the path of a dam breach flood.
2. Flood insurance.

C. Emergency Services

1. Dam conditioning monitoring.
2. Warning and evacuation plans based on dam failure.

D. Structural Projects

1. Dam improvements, spillway enlargements.
2. Remove unsafe dams.

V. Wildfires

A. Preventive

1. Zoning districts to reflect fire risk zones.
2. Planning and zoning to restrict development in areas near fire protection and water resources.
3. Requiring new subdivisions to space buildings, provide firebreaks, on-site water storage, wide roads, multiple accesses.
4. Building code standards for roof materials, spark arresters.
5. Maintenance programs to clear dead and dry brush, trees.
6. Regulation on open fires.

B. Property Protection

1. Retrofitting of roofs and adding spark arresters.
2. Landscaping to keep bushes and trees away from structures.
3. Insurance rates based on distance from fire protection.

C. Natural Resource Protection

1. Prohibit development in high-risk areas.

D. Emergency Services

1. Fire Fighting

VI. Winter Storms

A. Prevention

1. Building code standards for light frame construction, especially for wind-resistant roofs.

B. Property Protection

1. Storm shutters and windows
2. Hurricane straps on roofs and overhangs
3. Seal outside and inside of storm windows and check steals in spring and fall.
4. Family and/or company severe weather action plan drills:

- include a NOAA weather radio (99.1 FM)
- designate a shelter area or location
- keep a disaster supply kit, including stored food and water
- keep snow removal equipment in good repair; have extra shovels, sand, rock, salt and gas
- know how to turn off water, gas, and electricity at home or work

C. Natural Resource Protection

1. Maintenance program for trimming trees and shrubs

D. Emergency Services

1. Early warning systems/NOAA Weather Radio
2. Evacuation Plans

Appendix D

The Richter Magnitude Scale

Earthquake Severity

Magnitudes	Earthquake Effects
Less than 3.5	Generally not felt, but recorded.
3.5-5.4	Often felt, but rarely causes damage.
Under 6.0	At most slight damage to well-designed buildings. Can cause major damage to poorly constructed buildings over small regions.
6.1-6.9	Can be destructive in areas up to about 100 kilometers across where people live.
7.0-7.9	Major earthquake. Can cause serious damage over larger areas.
8 or greater	Great earthquake. Can cause serious damage in areas several hundred kilometers across.

Information above found at (http://www.seismo.unr.edu/ftp/pub/louie/class/100/magnitude.html)

The Richter Magnitude Scale

Seismic waves are the vibrations from earth quakes that travel through the Earth; they are recorded on instruments called seismographs. Seismographs record a zig-zag trace that shows the varying amplitude of ground oscillations beneath the instrument. Sensitive seismographs, which greatly magnify these ground motions, can detect strong earthquakes from sources anywhere in the world. The time, locations, and magnitude of an earthquake can be determined from the data recorded by seismograph stations.

The Richter magnitude scale was developed in 1935 by Charles F Richter of the California Institute of Technology as a mathematical device to compare the size of earthquakes. The magnitude of an earthquake is determined from the logarithm of the amplitude of waves recorded y seismographs. Adjustments are included for the variation in the distance between the various seismographs and the epicenter of the earthquakes. On the Richter Scale, magnitude is expressed in whole numbers and decimal fractions. For example, a magnitude 5.3 might be computed for a moderate earthquake, and a strong earthquake might be rated as magnitude 6.3. Because of the logarithmic basis of the scale, each whole number increase in magnitude represents a tenfold increase in measured amplitude; as an estimate of energy, each whole number step in the magnitude scale corresponds to the release of about 31 times more energy than the amount associated with the preceding whole number value.

At first, the Richter Scale could be applied only to the records from instruments of identical manufacture. Now, instruments are carefully calibrated with respect to each other. Thus, magnitude can be computed from the record of any calibrated seismograph.

Earthquakes with magnitude of about 2.0 or less are usually called micro earthquakes; they are not commonly felt by people and are generally recorded only on local seismographs. Events with magnitudes of about 4.5 or greater-there are several thousand such shocks annually-are strong enough to be recorded by sensitive seismographs all over the world. Great earthquakes, such as the 1964 Good Friday earthquake in Alaska, have magnitudes of 8.0 or higher. On the average, one earthquake of such size occurs somewhere in the world each year. The Richter Scale has no upper limit. Recently, another scale called the moment magnitude scale has been devised for more precise study of great earthquakes. The Richter scale is not used to express damage. An earthquake in a densely populated area which results in many deaths and considerable damage may have the same magnitude as a shock in a remote area that does nothing more than frighten the wildlife. Large-magnitude earthquakes that occur beneath the oceans may not even be felt by humans.
Above information can be found at;(http://neic.usgs.gov/neis/general/handouts/richter.hhtml)

Appendix E

Record from LEPC on File

Hinsdale County has always been heavily involved in Emergency Mitigation, but the first formal involvement in a mitigation plan was assembled in January 2002. The Local Emergency Planning Committee, the Regional Emergency Planning Committee, and or the Gunnison Basin Wild Fire Council were all involved in producing a mitigation plan for Hinsdale County. This plan was produced and critiqued through liaison at the LEPC meetings.

Record of Mitigation Meetings:

APPENDIX F

HINSDALE COUNTY

INCIDENT COMMAND

SYSTEM

REVISED 2002

Reasons for using the CICS

Experiences verify need for pre-planned system for the conduct of operations at the site of a disaster or emergency.

Use of an incident command system is increasingly mandated on or otherwise imposed.

- Federal legislation
- State executive direction
- Local ordinances/practices

I. PURPOSE: The purpose of this SOP is to outline procedures for the implementation of the incident command system, and for the designation of the incident commander and supporting staffs that will be applied in meeting all major emergencies occurring in Hinsdale County, to include multi-jurisdictional and multi-functional incidents.

Signatories to this SOP thereby signify agreement with the adoption of the Incident Command System (ICS) and the Multi-Agency Resource System (MARS) for implementation by their agencies. They also agree to insure that all appropriate members of their agencies/departments are briefed on and become familiar with this SOP.

II. DEFINITIONS:

A. Incident Command System (ICS). A standard organizational system for the management of emergencies with which all response agencies should become familiar. It provides common terminology and uniform procedures and organization to ensure effective coordination when two or more agencies work together.

B. Multi-Agency Resource System (MARS). The combination of facilities, equipment, personnel, procedures, and communications integrated into a common system with responsibility for coordination of assisting agency resources and support to agency emergency operations. The facility will normally function in the County Emergency Operations Center (EOC) in the Sheriff's Office; but may be established elsewhere on mutual agreement of the jurisdictions involved. Depending upon the nature and magnitude of the incident, the directors of emergency management will decide when/whether to open the EOC and when/whether to go to 24 hour operations. They will assure that appropriate support agencies are notified of the incident and that representatives of those agencies report to the EOC to carry out their assistance and support functions.

C. Modes. A numerical classification system of mode 1 to mode 4, used to quickly describe an incident and predetermine necessary dispatch and support actions. Size and complexity of each incident determines its mode class. Principal jurisdictional agency has responsibility for identifying each incident's mode. Incident Commander will ensure that mode is communicated to assisting and cooperating agencies.

III Modes of Operation: The following emergency response modes have been established for the implementation of the ICS in Hinsdale County.

Mode 1: A routine emergency response. No significant impact on local resources. No alerting of back- up is necessary. Normally involves only one agency but may require minimum cooperation or support from another agency. The supervisor of the initial elements of the principal responding agency will normally act as Incident Commander (IC) in accordance with that agencies normal procedures. The IC should establish a Command Post (even if its only on the hood of a vehicle on which he can place a map and from which he can communicate); so that communications and coordination between the IC and assisting or cooperating agencies can be established. MARS is not implemented and the EOC is not opened. Requirements for additional resources are channeled through the IC.

Mode 2: Routine emergency which exceeds the capacities of on-scene personnel and equipment, involves multiple response agencies, and requires mutual aid support and preliminary alerting of County and State resources. The ICS is implemented and in most cases the IC will be the Sheriff, who will establish an incident Command Post (ICP) and determine whether it is necessary to open the EOC and implement the MARS. Requirements for additional resources are channeled through the IC, to the EOC if it is opened, or to each individual agency. The Communications Center will notify the County Emergency Coordinator.

Mode 3: Magnitude of the incident exceeds the capabilities of routinely available mutual aid and requires full mobilization of county resources. In most cases the Incident Commander will be the County Sheriff. The ICP is opened. EOC is opened and MARS is implemented.

Mode 4: Situation exceeds available county resources and requires substantial mobilization of out-of-county, State and/or Federal resources. ICP and EOC are opened. ICS and MARS fully implemented.

IV. Incident Commander:

A. Functions: The Incident Commander (IC) will:

1. Assess the incident situation upon arrival at the scene and take charge of the entire situation, to include coordination of the activities of all emergency response agencies.

2. Establish and preside at a command post from which all control functions can be accomplished.

3. Manage tactical operations or, if the magnitude of the situation demands, designate an operations section chief to do so.

4. Activate additional staff elements of the ICS as deemed necessary and appropriate, brief command and general staff, and coordinate staff activities.

* 5. Appoint a liaison officer to serve as point of contact for the assisting and cooperating agency representatives.

* 6. Designate an information officer to formulate press releases and authorize release of that information to the media, as needed.

* 7. Ensure that planning meetings are conducted, and approve the Incident Action Plan.

8. Establish communications with the EOC, when it is opened, and keep the center informed of the incident situation at all times.

9. Approve requests for additional resources and submit them to the EOC, when it is opened.

* 10. Insure that appropriate and adequate records are being kept. Appoint planning section chief who oversees documentation.

11. Insure that dispatchers/radio operators are utilized at the ICP so that the IC won't be tied up on the radio instead of maintaining overall control of the incident.

12. Communicate with the emergency response agencies through the agency representatives located in the vicinity of the ICP. They, in turn, communicate with their own agencies on their own tactical nets. (See Para. VI, Communications and Annex C).

13. Determine information needs and inform command personnel of those needs.

* 14. Approve requests for release of resources.

15. Ensure that road block, staging area, command post and other appropriate

security functions are implemented, through the operations chief if one is designated.

* When situation designates.

B. Designation/Assignment. The agencies indicated below will designate/assign/provide the incident commander for the types of emergencies for which they are principally responsible. If necessary, the IC may designate a member of his/her own or another agency, as appropriate, to function as operations section chief and to manage the tactical operation, while still retaining overall charge of the situation. If circumstances arise which may require the IC to relinquish overall responsibility for the incident, he/she may request that another response agency assign an IC. Before relinquishing command, the original IC must insure that a new IC is designated, and is fully briefed on the situation, and that the Principal Response Agency has assigned an Agency Representative to the ICP.(See Para V, .)

Incident Location	Type of Emergency	Principal Agency
Within Lake City	Fire	Lake City Volunteer Fire Department
Within County/ Outside city	Fire	Hinsdale Sheriff Office Fire Department
DEBS Community	Fire	Archuletta Sheriff's Office
U.S. Forest	Fire	U.S.Forest/Sheriff
Within Hinsdale County	Hazmat	Dennis Spritzer Sheriff Denison
On Highways & Roads	Hazmat	Colorado State Patrol
On Highways & Road	Accidents	Hinsdale Sheriff's Office
Within Hinsdale County	Overdue person	Search & Rescue Sheriff
Within Hinsdale County	Missing Airplane	Hinsdale Sheriff's Office Search & Rescue
Within Hinsdale County	Floods	Hinsdale County Sheriff

Bureau of Land Management	Fire	BLM/Sheriff
Within Hinsdale County	All other incidents	Sheriff

V. Assisting or Cooperating Agencies: responding to an incident in which an ICP has been established will:

A. Establish communications with the IC through the ICP using the frequencies prescribed in paragraph VI, below, communications. (see annex C)

B. Check-in with the Incident Commander on arrival at the scene of the incident.

C. Obtain information on travel routes to the incident and location of the staging area (if one is established) before reaching the scene.

D. Send an Agency Representative to the ICP to meet with the IC (or the Liaison Officer, if one has been designated) or maintain communications with the IC.

E. Delegate full authority to the Agency Representative to make decisions on all matters affecting the agency's participation at the incident.

F. Insure that the Agency Representative understands that he/she is responsible for keeping that agency fully informed on the overall situation and keeping the IC informed of the agency's activities relating to the incident.

VI. ICS COMMUNICATIONS

A. Incident Command Post (ICP).

1. The IC will establish a command post which has the capability of communicating and maintaining radio contact with all emergency response agencies at the incident, i.e., any facility/vehicle used as a command post must be capable of communicating on all local emergency response agency frequencies.

2. The response agency will communicate through the dispatcher/communications officer operating in the ICP.

3. If the response agency (not a normal response agency) does not have compatible frequencies with the ICP, they will either furnish a pack set to ICP communications or they will send a representative to act as liaison.

4. The ICP will be identified with a green rotating light.

B. Inter-agency Radio Communications. (See Annex C)

1. The National Law Enforcement Emergency Channel (NLEC), transmitting and receiving on 155.475 MHz, has been designated by the Colorado Division of Disaster Emergency Services (and the Federal Communications Commission) as the channel to be used for coordination and communications in multi-jurisdictional and multi-functional emergencies. NLEC will only be used for inter-agency radio communications after clearance with the IC.

2. NLEC will be used for ICP to Communications Center/EOC radio traffic. If there is a need for communication between response agencies at the site, it should be by oral communication or on one of the response agency's tactical frequencies. For example: law enforcement at the site need to talk to fire, it should be on the fire frequency (yellow).

3. The Operations Chief may use NLEC as a tactical channel to communicate with section chiefs, branch directors, division and (if functionally organized) group supervisors. This use of NLEC must be authorized by the IC.

4. Signatories to this SOP will insure that emergency response vehicles are capable of transmitting and receiving radio traffic on NLEC. All agencies should attempt to have inter-agency communications by having other agencies' primary radio frequencies installed in their emergency response vehicles, especially command vehicles.

5. All agencies communicating on NLEC will use clear speech (no 10 codes or specific agency codes).

6. For radio communications purposes, the Incident Commander will name the incident (usually based on its location) and all radio communications to the ICP will be addressed as to that location.

C. Intra-agency communications:

1. Will be the responsibility of the agency concerned, and will be conducted in accordance with each agency's standing operating procedures.

2. Each agency will use its own assigned radio frequencies for its own tactical use.

3. Initial call out of agency's departments should be made by the Hinsdale Sheriff’s Office, with each department responsible for its own fan-out.

4. Each agency will insure that it can provide its own equipment for its personnel. Every effort will be made to include scanning mobile radios in its vehicles for agency operations, and portable radio sets to enable the Agency Representative at the ICP to

communicate with his/her own agency.

D. Logistics: NLEC (155.475) will be used for logistics traffic between the Incident Command Post and the Emergency Operations Center (EOC) until such time as a telephone line can be established.

E. Telephone Communications:

1. Every effort will be made to tie the ICP in to the commercial telephone system as soon as possible after the ICP is established.

F. Amateur Radio Clubs.

1. Incident Commanders should be aware that there is a local amateur radio association that may be able to assist with communications during an emergency. The contact may be made through the local EOC.

VII TRAINING

All signatories to this agreement will be responsible for providing in-house training to insure that all responding personnel are capable of functioning within the accepted Incident Command System.

This Incident Command System SOP is adopted and becomes effective on the 12/7/1988. Revised 12/4/2000

Colorado State Patrol

_____
Capt Jon Rapp, Supervisor

Hinsdale County Sheriff

_____
William B. Denison, Sheriff

Hinsdale Communications Center

_____
Chuck Dotts, Supervisor

Lake City Volunteer Fire

_____
Ed Nedletton, Fire Chief

_____

_____

Hinsdale County Ambulance

_____
Jerry Gray, Director

Hinsdale County Search & Rescue

_____
Keith Chambers, Coordinator

US Forest Service

_____
Jerry Chonka

Office of Emergency Management

_____
Joann Stone, Coordinator