SECTION 3 - COUNTIES AND COMMUNITIES

INCLUDING
COUNTY INFORMATION,
PROGRAMS, ANALYSES,
ASSESSMENTS, ETC.

COLORADO COUNTIES

Map Compilation: Colorado Division of Local Government, 2001

INTRODUCTION

Effective emergency management planning lays its foundation on hazard identification and risk assessment. Risk from natural hazards is the result of a combination of hazard, vulnerability, and exposure. Risk assessment is the process of measuring potential loss of life, personal injury, economic injury, and property and crop damage resulting from hazards. Past occurrences of hazard events are one indicator of possible future events. A review of the hazard history of counties helps provide a better understanding of susceptibility.

A survey was conducted by the Colorado Office of Emergency Management in 2003-4 to determine the natural hazards prevalent and of concern to counties. In 2007, another survey was conducted to solicit changes. The survey was targeted to emergency managment personnel. The survey, along with reviews of completed hazard mitigation plans, identified 13 hazards that present risk to one or more communities: avalanche, drought, earthquake, flood, hail, extreme heat, landslide, land subsidence, lightning, tornado, windstorm, winter weather, and wildfire. An overview of these results can be found in this section.

Information is presented by county; this section is designed to summarize the hazards facing Colorado's communities on a localized level. Local governments must continually assess the hazards threatening their communities and prioritize development of response capabilities and mitigation efforts. Assessment and efforts change along with population, land use, finances, and the local environment. Coloradans become vulnerable to hazards when they live, work, or visit an area where these events occur. Individuals and communities that prepare for the occurrence of a hazard are less vulnerable to its consequences than those that do not.

The vulnerability of Colorado's population is rooted in a relationship between the occurrence of hazard events, the proximity of people and property to these occurrences, and the degree that a community and its members are committed and prepared to cope with these occurrences and mitigate their effects.

Over the past decade, Colorado has experienced rapid population growth. According to the 1990 census, Colorado's population was 3,294,473. New figures from the 2000 census reveal that Colorado's population has grown by 1,006,788 (30.6%), setting the population total for the State at 4,301,261. The State Demography Office projects population at 6,257,281 in 2020.

The continued growth of Colorado's population increases the likelihood that vulnerability will increase, especially in the red zone. Many of the areas currently under development are high hazard areas. Compounding this problem, many public agencies responsible for the land use, emergency planning and mitigation are understaffed and on limited budgets.

Colorado's tourist population presents another vulnerability concern. Many areas economically depend on tourists each year. Most of these visitors flock to mountain locations and are, for the most part, unaware of the potential hazards associated with these areas. The preparedness, planning, and mitigation efforts undertaken by mountain communities must consider these visitors.

The Colorado Division of Emergency Management would like all communites within the State to conduct risk assessments, develop mitigation strategies, and adopt local hazard mitigation plans as a means to reduce further losses from natural hazard events. Mitigation planning should take place in all communities, at all levels of government, and in all nonprofit and private businesses. Multi-objective plans should integrate hazard loss reduction measures with other related local and regional planning activities. Plans should also integrate management of wldland urban interfaces, floodplains, stormwater and wastewater systems, and proper use of open space, as well as support successful implementation of mitigation projects. Incorporation of hazard mitigation and preparedness ideas in decisions about land development, industrial development, and the use of natural resources should be the goal of governments throughout the state.

There is a close correlation between settlement patterns, population growth, and the cost of disasters. When a disaster strikes a densely populated area, the costs are usually greater than in those incurred in a sparsely populated region. As a community grows, competition for remaining land increases. This results in a tendency to allow development in areas where hazards exist. Mitigation, through processes that guide development, lessens damage caused by hazard events and generates a monetary benefit by reducing funds spent on disaster response and recovery. Not all hazards can be avoided through mitigation efforts so a community must continually plan for response and recovery. Public awareness of hazards to which they may be exposed and education on preparedness is important in every community's emergency planning effort. A hazard analysis is a living document that requires routine review and update as a community and its hazards change.

The Division of Emergency Management (DEM) and Colorado Water Conservation Board (CWCB) used the community provided information in the Community Information System database to determine the counties with a higher number of structures and people located in the 100-year floodplain. The DEM also reviewed relatively recent large wildfire burn areas to determine areas in the short term that are more vulnerable. The areas are listed in the flood section of this plan. Many of the communities with higher identified flood risk have adopted codes, regulations, and ordinances specific to flood hazard. These are listed in the tables in this section. The Urban Drainage and Flood Control District plays a major role in the Denver metropolitan area. The DEM and Colorado State Forest Service (CSFS) use the community wildfire protection plans (CWPPs) to determine areas in the counties most at risk from wildfire. These specific subdivisions/areas are listed in the county sections. Structures at risk are identified in the CWPPs. Most CWPPs can be found online. Many of the communities with higher identified fire risk have adopted codes, regulations, and ordinances specific to fire hazard. These are listed in the tables in this section and some are outlined in the county descriptions. All communities have some effects from severe weather, including winter weather. Specific data from NCDC are listed in the hazards section. Most population and structures are at some risk from severe weather. DEM and Colorado Geologic Survey used existing geologic hazards data and maps from the Survey to identify counties most at risk. The county risk assessments maps are in this section, based on county plans and assessments. Expected growth for each county identifying a high risk for each hazard is included. The counties and larger cities using codes, regulations and ordinances to control development in hazard areas are listed in the tables following. More information on geologic hazards regulations and ordinances may be found on the Colorado Geologic Survey website.

LOCAL REGULATIONS

The Colorado Office of Emergency Management conducted a brief survey late in 2000 through spring 2001. County and city planners and building officials were requested to reply. Of 27 cities surveyed, 26 responded. Of 63 counties surveyed, 62 responded.

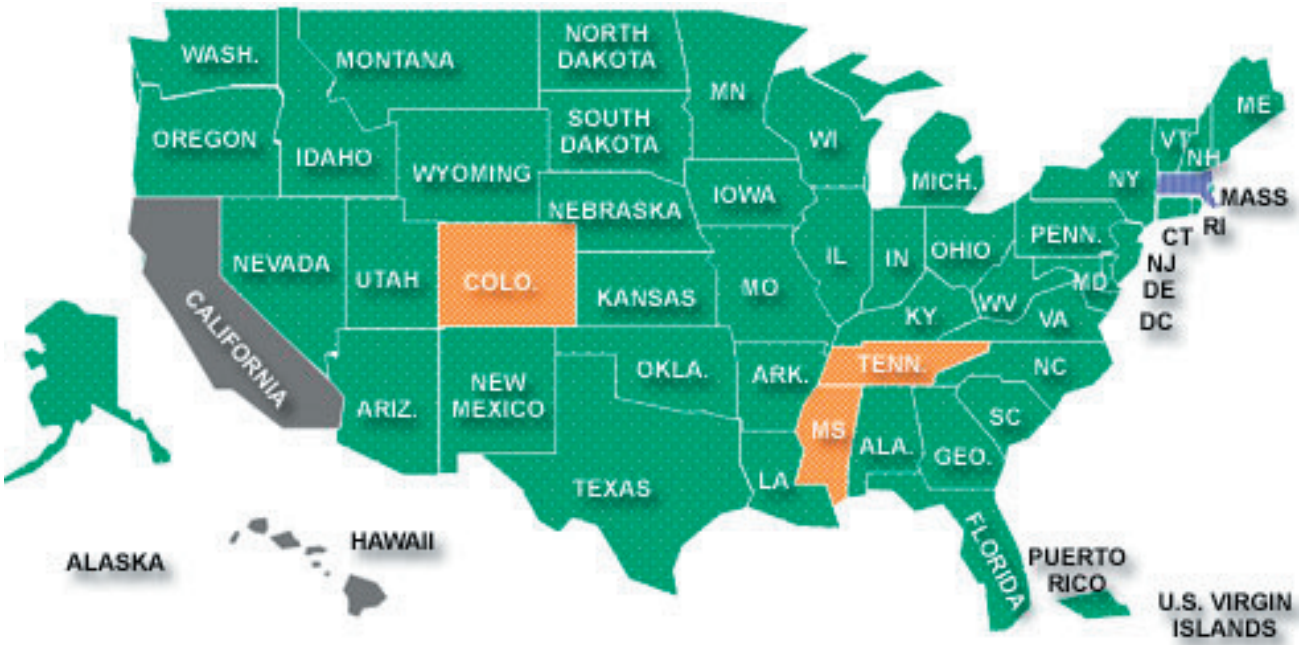
The survey contained six questions; three are relevant:
Do you have regulations pertaining to floodplains?
Do you have regulations pertaining to geologic hazards?
Do you have regulations pertaining to wildfire hazards?

Regulations Survey for Local Governments 2000-2001; Updated with local plans in 2007			
County	Floodplain	Geologic hazard	Wildfire
Adams	yes	yes	no
Alamosa	yes	no	no
Arapahoe	yes	yes	no
Archuleta	yes	yes	yes
Baca	yes	no	no
Bent	yes	yes	no
Boulder	yes	yes	yes
Chaffee	yes	yes	no
Cheyenne	no	no	no
Clear Creek	yes	no	yes
Conejos	yes	yes	yes
Costilla	yes	no	no
Crowley	no	no	no
Custer	no	no	no
Delta	yes	no	no
Denver	yes	yes	no
Dolores	yes	yes	yes
Douglas	yes	yes	yes
Eagle	yes	yes	yes
Elbert	yes	no	no
El Paso	yes	yes	yes
Fremont	yes	yes	yes
Garfield	yes	no	no
Gilpin	yes	yes	yes
Grand	yes	yes	no
Gunnison	yes	yes	yes
Hinsdale	yes	no	no
Huerfano	yes	no	no
Jackson	yes	yes	yes
Jefferson	yes	yes	yes
Kiowa	no	no	no
Kit Carson	no	no	no
Lake	yes	yes	yes
La Plata	yes	yes	no
Larimer	yes	yes	yes
Las Animas	yes	no	no
Lincoln	yes	yes	yes
Logan	yes	yes	no
Mesa	yes	yes	yes
Mineral	no	no	no
Moffat	yes	no	yes
Montezuma	yes	yes	no
Montrose	yes	yes	yes
Morgan	yes	no	no
Otero	yes	no	yes
Ouray	yes	yes	yes
Park	yes	yes	yes
Phillips	yes	no	no
Pitkin	yes	yes	yes
Prowers	yes	no	no
Pueblo	yes	yes	no
Rio Blanco	yes	yes	yes
Rio Grande	yes	yes	no
Routt	yes	yes	no
Saguache	no	yes	no
San Juan	yes	yes	yes
San Miguel	yes	yes	yes
Sedgwick	yes	no	no
Summit	yes	yes	yes
Teller	yes	yes	yes
Washington	yes	yes	yes
Weld	yes	yes	no
Yuma	yes	yes	no
Sources: Colorado Office of Emergency Management 2001; http://geosurvey.state.co.us/Default.aspx?tabid=185; local plans			

Regulations Survey for Local Governments 2000-2001			
City	Floodplain	Geologic hazard	Wildfire
Arvada	yes	yes	no
Aurora	yes	yes	no
Boulder	yes	yes	yes
Brighton	yes	no	no
Broomfield	yes	yes	no
Canon City	yes	no	no
Castle Rock	yes	yes	yes
Colorado Spgs	yes	yes	yes
Commerce City	yes	no	no
Englewood	yes	no	no
Ft Collins	yes	no	yes
Golden	yes	no	no
Grand Junction	yes	yes	yes
Greeley	yes	yes	yes
Lafayette	yes	yes	no
Lakewood	yes	yes	no
Littleton	yes	no	no
Longmont	yes	no	no
Louisville	yes	yes	no
Loveland	yes	yes	yes
Northglenn	yes	no	no
Parker	yes	yes	no
Pueblo	yes	?	?
Thornton	yes	yes	no
Westminster	yes	yes	no
Wheatridge	yes	no	no
Source: Colorado Office of Emergency Management 2001; *Local Hazard Regulations*, Colorado Geological Survey 2007			

CODES

The following tables show which communities have adopted codes according to the ICC. In Colorado, codes are adopted at the local level. ICC makes every effort to provide current, accurate code adoption information, but in some cases jurisdictions do not notify ICC of adoptions, amendments or changes to their codes. To ensure you have accurate information, please contact the jurisdiction. (www.iccsafe.org/government/adoption.html)



Updated: 10/12/06

One or more International Codes® currently enforced statewide

One or more International Codes® enforced within state at local level

One or more International Codes® adopted statewide with future enforcement date

http://www.iccsafe.org/government/adoption.html

International Codes-Adoption by Jurisdiction

X = Effective Statewide A = Adopted, but may not yet be effective L = Adopted by Local Governments
S = Supplement 06 = 2006 Edition 04 = 2004 Edition 03 = 2003 Edition 00 = 2000 Edition

ST	Jurisdiction	IBC	IRC	IFC	IMC	IPC	IPSDC	IFGC	IECC	IPMC	IEBC	ICCPC	IWUIC*	IZC	ICCEC	Comments
CO	Colorado	L	L	L	L	L	L	L	L	L	L	L	L	L	L	IBC, IFC: Colorado Div. of Fire Safety
CO	Alamosa	L	L		L											
CO	Arapahoe County	L03	L03		L03	L03		L03	L03							
CO	Archuleta	L	L	L												
CO	Arvada	L03	L03	L03	L03	L03		L03	L03							
CO	Arvada Fire District			L												
CO	Aspen	L03	L03		L03	L03		L03		L03	L03					
CO	Aspen Fire Dept			L03												
CO	Ault	L	L		L	L		L								
CO	Aurora	L03	L03	L03	L03	L03		L03								
CO	Avon	L03	L03	L03	L03											
CO	Avondale	L	L		L					L						
CO	Basalt					L										
CO	Bayfield	L03	L03		L03			L03								
CO	Bennett	L	L		L	L		L								
CO	Black Hawk	L	L	L	L	L		L	L		L					
CO	Blue River		L												L	
CO	Boulder	L03	L03	L03	L03	L03		L03	L03		L03					
CO	Boulder County	L	L		L	L		L	L							
CO	Breckenridge	L	L		L	L		L							L	
CO	Brighton	L03	L03	L03	L03	L03										
CO	Broomfield, City/County	L	L	L	L	L		L	L							
CO	Brush	L03	L03	L03	L03	L03		L03	L03							
CO	Buena Vista	L	L													
CO	Canon City	L	L	L	L			L								
CO	Carbondale	L03	L03			L03		L03	L03							
CO	Castle Rock	L	L		L	L		L	L		L					
CO	Centennial	L03	L03	L03	L03	L03		L03								
CO	Central City	L03	L03	L03	L03	L03		L03	L03							
CO	Chaffee County	L	L													
CO	Cherry Hills Village	L	L	L	L	L		L	L							
CO	Clear Creek County	L03	L03		L03	L03										
CO	Clifton Fire Protection Dist			L												
CO	Coal Creek Canyon Fire Protection District			L03									L03			
CO	Collbran	L	L	L	L			L	L	L						
CO	Colorado Div. of Fire Safety	L		L												
CO	Colorado Div. of Housing	L03	L03		L03	L03		L03	L03							
CO	Colorado Div. Of Oil and Public Safety	L		L	L											All Public Schools
CO	Colorado Examing Brd of Plumbers and State Bldgs		X03		X03	X03		X03								
CO	Colorado Springs	L03	L03	L03	L03			L03	L03		L03					
CO	Colorado State Buildings	L03			L03				L03							
CO	Columbine Valley	L	L		L	L		L		L					L	
CO	Commerce City	L03	L03	L03	L03	L03		L03	L03	L03	L03	L03				
CO	Copper Mountain FPD			L												
CO	Cortez	L03	L03	L03	L03	L03		L03	L03	L03						
CO	Crested Butte	L03	L03		L03	L03		L03								
CO	Cripple Creek	L	L	L	L	L		L	L	L	L					
CO	Cunningham Fire Protection District			L03												
CO	Dacono					L97										
CO	DeBeque	L	L	L	L			L	L	L						
CO	Del Norte	L03	L03		L03	L03										
CO	Delta	L03	L03	L03	L03	L03		L03	L03							
CO	Denver	L03	L03	L03	L03	L03		L03	L03							
CO	Dillion	L	L	L	L	L		L							L	
CO	Douglas County	L03	L03	L03	L03	L03		L03								
CO	Durango	L03	L03		L03	L03		L03	L03							
CO	Eagle	L03	L03		L03	L03		L03	L03						L03	
CO	Eagle County	L03	L03	L03	L03											
CO	Eaton	L03	L03		L03	L03		L03								
CO	Edgewater	L	L		L	L		L		L						
CO	El Paso County	L03	L03		L03			L03	L03		L03					
CO	Elk Creek FPD			L03									L03			
CO	Estes Park	L03	L03		L03	L03		L03	L03		L03					
CO	Evans	L03	L03	L03	L03	L03		L03		L03						
CO	Evergreen Fire Protection District			L03									L03			

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ST	Jurisdiction	IBC	IRC	IFC	IMC	IPC	IPSDC	IFGC	IECC	IPMC	IEBC	ICCPC	IWUIC*	IZC	ICCEC	Comments
CO	Fairmont Fire Protection District			L00												
CO	Federal Heights	L03	L03	L03	L03	L03		L03	L03	L03						
CO	Firestone	L	L		L	L		L								
CO	Florence	L	L	L	L											
CO	Foothills Fire and Rescue			L03									L03			
CO	Fort Collins		L03		L03	L03		L03								
CO	Fort Lupton					L										
CO	Fort Morgan	L03	L03	L03	L03	L03		L03	L03							
CO	Fraser	L	L		L	L		L								
CO	Frederick	L03	L03		L03	L03		L03								
CO	Fremont County	L03	L03													
CO	Frisco	L03	L03	L00	L03	L03		L03	L03							
CO	Fruita	L	L	L	L			L	L	L						
CO	Fruita Fire District			L												
CO	Garfield County	L03	L03		L03	L03		L03								
CO	Genessee FPD			L03									L03			
CO	Gilcrest	L	L		L	L		L								
CO	Glendale				L											
CO	Glenwood Springs	L03	L03	L03	L03	L03		L03		L03	L03					
CO	Glenwood Springs Fire District			L03												
CO	Golden Gate Fire			L03									L03			
CO	Granby	L	L		L	L		L								
CO	Grand County	L	L		L	L		L								
CO	Grand Jct Rural FPD			L												
CO	Grand Junction	L	L	L	L			L	L	L						
CO	Grand Junction Fire Dept			L												
CO	Grand Lake	L	L		L	L		L								
CO	Greeley	L03	L03	L03	L03	L03		L03		L03	L03					
CO	Greenwood Village	L03	L03	L03	L03	L03		L03								
CO	Gunnison	L03	L03	L03	L03	L03		L03	L03	L03	L03	L03				
CO	Gunnison County	L03	L03		L03			L03	L03							
CO	Gypsum	L03	L03	L03	L03			L03								
CO	Hayden					L										
CO	Hot Sulphur Springs	L	L		L	L		L								
CO	Hudson	L03	L03		L03	L03		L03								
CO	Huerfano County	L03	L03								L03					
CO	Ignacio	L03	L03		L03	L03		L03	L03							
CO	Indian Hills FPD			L												
CO	Inter-Canyon Fire Rescue			L03									L03			
CO	Jamestown	L03	L03		L03	L03		L03	L03							
CO	Jefferson County	L03	L03	L03	L03	L03		L03	L03							
CO	Johnstown	L03	L03	L03	L03	L03		L03	L03							
CO	Keenesburg				L	L										
CO	Kersey	L	L		L	L		L								
CO	Kremmling	L	L		L	L		L								
CO	La Plata County	L03	L03		L03	L03		L03	L03							
CO	Lafayette	L	L		L	L		L	L							
CO	Lake County	L03	L03		L03	L03		L03			L03				L03	
CO	Lake Dillon FPD			L												
CO	Lakewood	L	L	L	L	L		L	L							
CO	Lamar	L	L	L	L	L		L		L						
CO	Larimer County	L03	L03		L03	L03		L03	L03		L03					
CO	Littleton	L	L		L	L		L		L					L	
CO	Littleton FPD			L03												
CO	Lochbuie	L03	L03	L03	L03	L03		L03								
CO	Logan County	L	L		L	L00		L00								
CO	Lone Tree			L03												
CO	Longmont	L03	L03	L03	L03	L03		L03	L03	L03						
CO	Louisville	L	L	L	L	L		L	L							
CO	Loveland	L03	L03		L03	L03		L03		L03						
CO	Lower Valley Fire District			L												
CO	Lyons	L	L		L	L		L								
CO	Mancos	L	L						L	L						
CO	Mead	L	L		L	L		L								
CO	Meeker	L03	L03	L03	L03			L03								
CO	Mesa County Regional	L	L	L	L			L	L	L						Includes Palisade, Fruita, Collbran, DeBeque & City of Grand Junction
CO	Minturn	L	L		L	L										
CO	Moffat County	L03	L03		L03	L03		L03	L03	L03						
CO	Montezuma	L	L		L	L		L							L	
CO	Montrose	L03	L03	L03	L03	L03		L03		L03	L03	L03				
CO	Morgan County	L03	L03		L03											
CO	Mountain Village	L	L		L			L		L						
CO	Mt Crested Butte					L										

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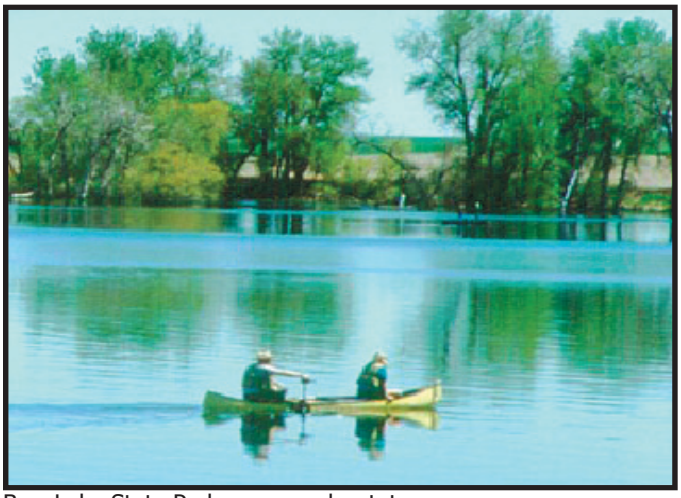
CO	Nederland	L	L		L	L		L	L							
CO	North Fork FPD			L03									L03			
CO	North Metro FPD			L03									L03			
CO	Northglenn	L03	L03		L03	L03		L03	L03							
CO	Nunn	L	L		L	L		L								
CO	Oak Creek					L										
CO	Orchard City	L	L		L	L		L	L							
CO	Palisade	L	L	L	L			L	L	L						
CO	Parachute	L03	L03	L03	L03	L03		L03								
CO	Parker	L03	L03	L03	L03	L03		L03	L03		L03					
CO	Parker Fire Protection District			L												
CO	Pierce	L	L		L	L		L								
CO	Pikes Peak Regional Building Dept.	L03	L03	L03	L03			L03	L03		L03					
CO	Pitkin County	L	L		L	L		L			L					
CO	Platteville	L	L		L	L		L								
CO	Pleasant View Fire Dept.			L03												
CO	Poncha Springs	L	L													
CO	Pueblo	L03	L						L							
CO	Pueblo County	L03	L03						L03							
CO	Rangely	L	L		L	L	L	L								
CO	Red Cliff	L	L		L	L										
CO	Red White & Blue Fire Rescue			L												
CO	Rifle	L03	L03		L03	L03		L03								
CO	Rio Blanco County	L	L		L	L										
CO	Rio Grande County	L03	L03		L03											
CO	Routt County	L03	L03	L03	L03	L03		L03			L03				L03	
CO	Routt County Regional					L										Includes Steamboat Springs
CO	Salida	L	L	L												
CO	San Miguel County	L03	L03		L03			L03	L03		L03					
CO	Severance	L	L		L	L		L								
CO	Sheridan	L03	L03	L03					L03	L03	L03					
CO	Silverthorne	L03	L03		L03	L03		L03								
CO	Snake River FPD			L												
CO	Snowmass Village	L	L	L	L	L		L	L		L					
CO	South Fork	L03	L03		L03											
CO	South Metro Fire District			L												
CO	South West Adams County Fire & Rescue			L06												
CO	Steamboat Springs					L										
CO	Sterling	L	L	L	L											
CO	Summit County	L	L		L	L		L							L	
CO	Superior	L03	L03	L03	L03	L03	L03	L03	L03	L03				L03		
CO	Thornton	L03	L03	L03	L03	L03		L03	L03							
CO	Timnath	L	L		L	L		L								
CO	Tri-Lakes Monument Fire Rescue	L03		L03	L03	L03		L03	L03				L03		L03	
CO	Trinidad	L03	L03	L03	L03				L04S							
CO	Vail				L	L										
CO	Weld County	L	L		L	L		L								
CO	Wellington	L	L		L	L		L								
CO	West Metro Fire Rescue			L03												
CO	Westminster	L	L	L	L	L		L	L							
CO	Wheat Ridge	L03	L03	L03	L03	L03		L03	L03	L03						
CO	Wheat Ridge Fire Protection District	L03		L03	L03	L03										
CO	Wiggins	L03	L03		L03											
CO	Windsor	L03	L03		L03	L03		L03								
CO	Winter Park	L	L	L	L	L		L								
CO	Yampa					L										

POPULATION FORECASTS FROM THE STATE DEMOGRAPHY OFFICE, DEPARTMENT OF LOCAL AFFAIRS								
County	April 1990	April 2000	Change 1990-2000	Percent Change 1990-2000	July 2020	Change 2000-2020	Percent Change 2000-2020	Persons per Square Mile
Adams	265,038	363,857	98,819	37.3	557,541	193,684	53	343.11
Alamosa	13,617	14,966	1,349	9.9	19,808	4,842	32	21.80
Arapahoe	391,511	487,967	96,456	24.6	683,817	195,850	40	664.49
Archuleta	5,345	9,898	4,553	85.2	19,546	9,648	97	8.65
Baca	4,556	4,517	-39	-0.9	4,101	-416	- 9	1.67
Bent	5,048	5,998	950	18.8	6,903	905	15	4.10
Boulder	225,339	291,288	65,949	29.3	344,596	53,308	18	386.32
Broomfield					66,284	-	-	1,345.74
Chaffee	12,684	16,242	3,558	28.1	23,143	6,901	42	16.66
Cheyenne	2,397	2,231	-166	-6.9	2,214	-17	-1	1.19
Clear Creek	7,619	9,322	1,703	22.4	12,675	3,353	36	23.95
Conejos	7,453	8,400	947	12.7	9,699	1,299	15	6.66
Costilla	3,190	3,663	473	14.8	4,207	544	15	2.95
Crowley	3,946	5,518	1,572	39.8	6,574	1,056	19	7.18
Custer	1,926	3,503	1,577	81.9	6,471	2,968	85	5.36
Delta	20,980	27,834	6,854	32.7	46,306	18,472	66	26.33
Denver	467,610	554,636	87,026	18.6	644,749	90,113	16	3,665.69
Dolores	1,504	1,844	340	22.6	2,350	506	27	1.71
Douglas	60,391	175,766	115,375	191.0	414,633	238,867	136	298.60
Eagle	21,928	41,659	19,731	90.0	73,667	32,008	77	29.03
El Paso	397,014	516,929	10,226	106.0	762,879	245,950	48	265.55
Elbert	9,646	19,872	119,915	30.2	42,124	22,252	112	12.32
Fremont	32,273	46,145	13,872	43.0	62,084	15,939	35	31.13
Garfield	29,974	43,791	13,817	46.1	98,107	54,316	124	17.13
Gilpin	3,070	4,757	1,687	55.0	6,550	1,793	38	33.17
Grand	7,966	12,442	4,476	56.2	22,366	9,924	80	7.44
Gunnison	10,273	13,956	3,683	35.9	17,892	3,936	28	4.38
Hinsdale	467	790	323	69.2	1,086	296	37	0.73
Huerfano	6,009	7,862	1,853	30.8	10,641	2,779	35	4.98
Jackson	1,605	1,577	-28	-1.7	1,784	207	13	0.95
Jefferson	438,430	527,056	88,626	20.2	607,417	80,361	15	689.01
Kiowa	1,688	1,622	-66	-3.9	1,533	-89	-5	0.86
Kit Carson	7,140	8,011	871	12.2	8,754	743	9	3.65
La Plata	32,284	43,941	11,657	36.1	68,613	24,672	56	28.25
Lake	6,007	7,812	1,805	30.0	13,875	6,063	78	20.70
Larimer	186,136	251,494	65,358	35.1	366,240	114,746	46	103.32
Las Animas	13,765	15,207	1,442	10.5	21,529	6,322	42	3.41
Lincoln	4,529	6,087	1,558	34.4	6,700	613	10	2.28
Logan	17,567	20,504	2,937	16.7	28,574	8,070	39	11.71
Mesa	93,145	116,255	23,110	24.8	181,947	65,692	57	39.05
Mineral	558	831	273	48.9	1,155	324	39	1.08
Moffat	11,357	13,184	1,827	16.1	17,712	4,528	34	2.82
Montezuma	18,672	23,830	5,158	27.6	33,752	9,922	42	12.21
Montrose	24,423	33,432	9,009	36.9	57,411	23,979	72	16.87
Morgan	21,939	27,171	5,232	23.8	39,581	12,410	46	21.91
Otero	20,185	20,311	126	0.6	22,082	1,771	9	15.43
Ouray	2,295	3,742	1,447	63.1	6,731	2,989	80	7.94
Park	7,174	14,523	7,349	102.4	37,130	22,607	156	7.51
Phillips	4,189	4,480	291	6.9	5,054	574	13	6.73
Pitkin	12,661	14,872	2,211	17.5	21,871	6,999	47	16.93
Prowers	13,347	14,483	1,136	8.5	15,808	1,325	9	8.49
Pueblo	123,051	141,472	18,421	15.0	193,001	51,529	36	63.04
Rio Blanco	6,051	5,986	-65	-1.1	7,575	1,589	27	1.88
Rio Grande	10,770	12,413	1,643	15.3	15,671	3,258	26	14.29
Routt	14,088	19,690	5,602	39.8	31,682	11,992	61	9.27
Saguache	4,619	5,917	1,298	28.1	8,020	2,103	36	2.06
San Juan	745	558	-187	-25.1	657	99	18	1.48
San Miguel	3,653	6,594	2,941	80.5	10,951	4,357	66	5.66
Sedgwick	2,690	2,747	57	2.1	3,027	280	10	4.86
Summit	12,881	23,548	10,667	82.8	40,880	17,332	74	44.44
Teller	12,468	20,555	8,087	64.9	30,841	10,286	50	39.97
Washington	4,812	4,926	114	2.4	5,170	244	5	1.96
Weld	131,821	180,936	49,115	37.3	360,335	179,399	99	57.00
Yuma	8,954	9,841	887	9.9	11,205	1,364	14	4.21
Total	**3,294,473**	**4,301,211**	**1,006,788**	***30.6**	**6,257,281**			

Source: U.S. Bureau of the Census 2001, Colorado Demography Office 2007 *Overall average percent change.

Adams County √

Adams County is located to the northeast of Denver. The southwestern part of the county is heavily populated and contains several cities that are suburbs of Denver. The eastern part of the county is rural and agriculturally oriented. Adams County participated in the development of and is included in the **Denver Regional Natural Hazard Mitigation Plan**. Through the assessment process, the county identified thunderstorm (tornado/hail/lightning), winterstorm, flood, and drought as the hazards that pose the greatest risk. The North Central Region evacuation planning community is working on a regional evacuation plan; OEM is disseminating brochures on natural hazards safety and implementing the "Take Part and Be Ready" classes, including a natural hazards section. Public dissemination warning systems include: EAS (current procedure is to trigger activation through the NWS); Emergency Preparedness Network–"Reverse 911"; community specific warning sirens – several communities within Adams County have warning siren systems, but no one system covers all of Adams County.



Barr Lake State Park, www.parks.state.co.us

Tornados-Adams County is second in the State behind Weld County in the number of tornadic events recorded each year. From 01/01/1950 to 12/31/2006 there have been 148 reported tornado events with 43 associated injuries and $33 million in property and crop damage. Several F3s have been reported: an F3 three miles in length and 400 yards wide was reported on 06/12/1982 and an F3 four miles in length and 440 yards wide was reported on 05/18/1975.

Hail-235 hail storms and five injuries have been reported between 09/19/1955 and 06/12/2006. Through the hazard identification and risk assessment process, over 40,000 residential structures and over 400 businesses are potentially exposed to hail hazards. Four inch hail stones were associated with the 6/2/2005 storm that occurred 38 miles east of Bennett. Estimates of total damages for all storms exceed $240 million.

Winterstorms-Heavy winter storms affecting the metropolitan area occurred in 1913, 1982, 1997, 2003 and 2006. Heavy snow storms bring a community to a standstill by inhibiting transportation, and by causing structural collapse and power outages. Repair and removal costs are significant. In 2006 Adams County was included in the Presidential Snow Emergency declaration after receiving close to 22 inches of snowfall in a one-day period at the Northglenn station.

Population (2000):	348,618
% Growth from 1990:	37%
County Size (square miles):	1,184
County Seat:	City of Brighton

Lightning-Two fatalities, two injuries, and nearly $300,000 in property damage are associated with 17 lightning events (14 days of events) reported from 06/18/1994 to 6/21/2006.

Flood-There are 14 recorded flood events for Adams County between 1993 and 2004. Descriptions of historic flood events are in the **Denver Regional Natural Hazard Mitigation Plan** on Page 25. The western part of the county is dominated by the South Platte River and its tributaries. Other drainages include Clear Creek, Big Dry Creek, and Little Dry Creek. There are some intermittent creeks, with broad, shallow floodplains east of Denver International Airport. The hazard identification and risk assessment process identified 3,500 residential properties and over 60 businesses that have potential exposure to flood hazard. Within the last three years flood mitigation has been done for the Erie tributary (tributary for Big Dry Creek that runs from York Street to Big Dry Creek through Wadley Farms subdivision south of 144th Avenue). Plans include the Hoffman Master Plan Update, Big Dry Creek Northern Tributaries Master Plan Update, and 54th and Pecos Street Drainage Master Plan. The western parts of the county are in the Urban Drainage and Flood Control District.

The following communities participate in the **National Flood Insurance Program**: unincorporated Adams County and the Cities of Arvada, Aurora, Brighton, Commerce City, Federal Heights, Northglenn, Thornton and Westminster. According to the 2003 **Community Rating System** Eligible Communities List, the Cities of Aurora, Thornton and Westminster have ratings of eight and Arvada has seven.

Drought-2002 was the driest year on record for the Denver region and much of the State. The eastern portion of the county is primarily agricultural, making the area vulnerable to drought.

History

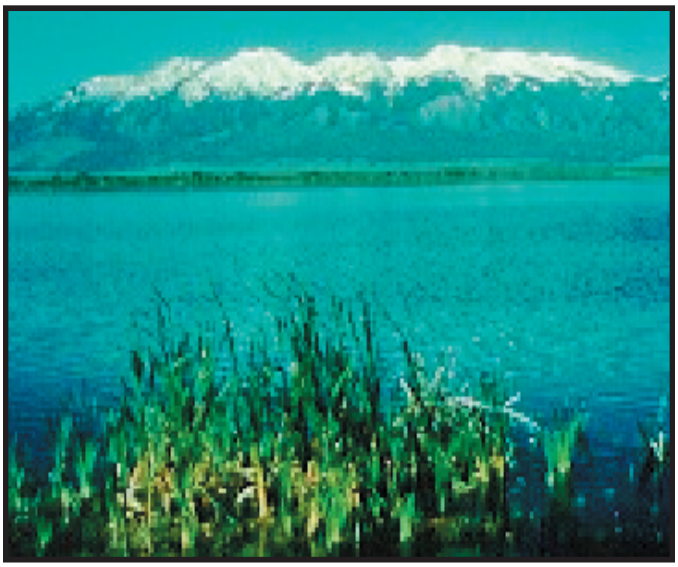
2000	USDA Disaster	Drought
2001	State	Severe Weather
2002	Presidential Disaster	Wildfire
2002	USDA Disaster	Drought
2002	Presidential Disaster	Wildfires
2003	Presidential Emergency	Snow
2006	USDA Disaster	Drought, Fire, Heat, High Winds
2006	Presidential Emergency	Snow

Potential/Current Mitigation Projects:
Kenwood Pond/Dahlia Pond flood mitigation; 96th Ave./McKay flood mitigation; Globeville/Utah Junction flood mitigation; Utah Junction Clay Street outfall; Shaw Heights Tributary flood mitigation; Hoffman Drainage; Brantner Gulch flood mitigation; upgrade flood warning systems; relocation/acquisition in Federal Heights; channel modifications in Arvada; critical facility protection in Federal Heights; update Arvada's structural design standards; create flood warning systems for Federal Heights; update local hazard mitigation plan, flood plans, fire plans; open space/acquisition/demolition in unincorporated Adams Co.; updating hazard analysis for hazmat+, including population and infrastructure at risk; tornado and severe weather shelters; finish regional evacuation plan; continue disseminating brochures on natural hazards safety; continue the "Take Part and Be Ready" classes

Alamosa County

Alamosa County is in the south central region of Colorado. It has varied topography ranging from mountains along the northeastern border to high deserts and agricultural areas. In a risk assessment survey conducted by the Colorado Division of Emergency Management in 2007, the county emergency manager identified flood, wildfire, and winter storm as the three natural hazards most threatening the community. The emergency manager reports that there were no notable changes to their risk evaluation within the last three years. The county has an emergency preparedness network in place for warnings. Increased capabilities over the past three years include regional GIS capabilities, the completion of a regional EOC, and continual training in interoperable communications (DTR).

Alamosa County was in the **Project Impact** Program as part of the six-county San Luis Valley region. The Valley entered the program in 2000.



San Luis Lakes State Park, www.parks.state.co.us

Flood-For almost a century, flooding along the Rio Grande River has caused damage to the Town of Alamosa. In June 1927, snowmelt and heavy rains flooded the Rio Grande River from Rio Grande Reservoir to past Alamosa. Five bridges were destroyed and train service was halted. Three deaths were associated with this event. Mitigation measures have been implemented on the river channel. A levee constructed by the Army Corps of Engineers has effectively reduced, but not eliminated, the vulnerability of the residents.

The following communities participate in the **National Flood Insurance Program**: unincorporated Alamosa County and the City of Alamosa. Both communities are also in the **Community Rating System** with a rating of nine.

Wildland/Grassland Fire-Although much of the county is agricultural, Colorado State Forest Service figures show that as of 1999, there is one subdivision totaling 200 acres in the urban/wildland interface. The county was included in the 2002 presidential disaster declaration for wildfires. In 2000, a wildfire spread from a neighborhood burning pit near the Great Sand Dunes National Monument, where about 5,000 acres of grass and juniper burned. In 1973, a lightning strike started a forest fire on Mt. Blanca destroying thousands of acres. The county is a participant in the **Emergency Fire Fund**. Zapata Subdivision has a **Community Wildfire Protection Plan**. According to a Colorado Connection Summer/Fall 2006 article, the Zapata Homeowners Association (ZHA) developed the plan in 2002 and has been mitigating for wildfire ever since. The report states that "most full-time residents created defensible space around their homes. In addition, the ZHA fire committee removed insect riddled pinyon and ponderosa pine." It also states that the ZHA has purchased a Sentry Siren for evacuation and will install a water and dry hydrant system.

Population (2000):	14,966
% Growth from 1990:	10%
County Size (square miles):	720
County Seat:	Alamosa

Winterstorms-Ninety-two snow and ice events were reported for the Alamosa County vicinity between 1/29/1994 and 7/31/2006. Nine fatalities, 2 injuries, and $1.92 million in damage were attributed to these widespread events. In 2003 Alamosa County was included in the Presidential Emergency declaration for snow.

Thunderstorms & High Winds-Between 05/31/1962 and 07/17/2006, 31 thunderstorms and high wind events were recorded. Nine persons were injured and close to $900,000 in damages occurred in the area.

Lightning-In 1973, a lightning strike started a forest fire on Mt. Blanca destroying thousands of acres. From the period of 08/19/1996 through 08/02/2003, one reported injury and $40,000 in damage occurred from lightning.

Hail-Between 06/14/1961 and 06/27/2000, 10 hail events over an eight day period were reported. A hailstorm in August 1993 resulted in $500,000 in damage, including $75,000 in damage to nine aircraft at the Alamosa Airport.

Tornados-Thirteen tornado events have been recorded from 07/10/1955 through 06/26/2006. The strongest recorded tornadic event was an F2 on 7/10/1955.

History

1995	State	Flooding
2000	Local	Great Sand Dunes Fire
2002	Presidential Disaster	Wildfires
2002	USDA Disaster	Drought
2003	Presidential Emergency	Snow
2006	USDA Disaster	Drought, Fire, Heat, High Winds

Potential/Current Mitigation Projects

Local hazard mitigation plans; community wildfire protection plans; flood mitigation plans; projects as listed in the plans; water and dry hydrant system for Zapata subdivision

Arapahoe County √

Arapahoe County borders Denver to the south and southeast. Part of the county is rural and agriculturally-oriented. Arapahoe County participated in the development of and is included in the **Denver Regional Natural Hazard Mitigation Plan**. Through the risk assessment process, the county identified tornados, thunderstorms and associated threats, flooding, and drought as the hazards that pose the greatest risk. The emergency manager notes that the risk assessment is affected by growth in central Arapahoe County and growth moving east into rural areas that are prone to severe weather. The county has improved their GIS system and mapping program (pictometry) in the last three years. The county has designed a communication system consisting of email, teletype, pager, fax and phone alerts to key personnel. They also access the EAS system and have reverse 911. They obtain weather alerts, etc. from 3 different sources. The county provides natural hazards public education through brochures and handouts. The metro area counties are working on evaucation plans.

Cherry Creek Dam Photo: http://corpslakes.usace.army.mil/

Hail-Two hundred and seventy-five hailstorms over 144 days were recorded between 05/27/1962 and 06/12/2006; the average hailstone size was calculated at 1.2 inches. Over $88 million in damages was reported for these events.

Lightning-Ten injuries and three fatalities were attributed to 12 lightning events reported from 1980 to 2002. Several lightning events have triggered numerous property fires in the county.

Tornados-Six funnel clouds and 78 tornados over 54 days were reported from 07/02/1964 to 07/3/2005. A tornado in August 2002 caused over $6 million dollars in property damage. The strongest tornado reported was an F2 in 1986. One injury and nearly $9 million are associated with these storms.

High Winds-Sixty thunderstorm and high wind events were reported over 48 days from 08/25/1964 through 07/04/2006. Seven injuries and over $500,000 in damages were reported.

Flood-The history of Arapahoe County shows that many floods have occurred within the past 100 years. Between 1997 and 7/31/2006 there were 19 recorded flood events. Bear Creek, South Platte River, Plum Creek, and Cherry Creek have all flooded. Several smaller tributaries, including West Bijou Creek and Rattlesnake Creek, have experienced extreme flooding. Through the hazard identification and risk assessment process, the county identified approximately 4,700 households and 350 businesses that have high risk of flooding.

Population (2000):	487,967
% Growth from 1990:	24.6%
County Size (square miles):	818
County Seat:	Littleton

There are five Class I dams and four Class II dams in the county. All Class I dams have emergency preparedness plans. The following communities participate in the **National Flood Insurance Program**: unincorporated Arapahoe County, Aurora, Cherry Hills, Columbine Valley, Deer Trail, Englewood, Glendale, Greenwood Village, Littleton and Sheridan. According to the 2003 **Community Rating System** List of Eligible Communities, Araphoe County and the cities of Cherry Hills Village, Englewood and Aurora have a community rating of eight and the City of Littleton is rated seven. The western parts of the county are served by the Urban Drainage and Flood Control District.

Drought-Major threats to the eastern portion of the county include hazards affecting livestock and crops, making the area very vulnerable to drought. The region has experienced drought for years. 2002 was the driest year on record for the region.

Wildland/Grassland Fire-There are growing concerns about the risks of the wildland/urban interface affecting suburban developments in the county. Through the hazard identification and risk assessment process the county identified approximately 6,400 households and 600 businesses as having high to very high risk to wildfire. Aurora Water Resources and Centennial Water and Sanitation District are members of the Coalition for the Upper South Platte.

Winterstorms-Heavy winter storms affecting the metropolitan area occurred in 1913, 1982, 1997, 2003, 2005, and 2006. Heavy snow storms brought the community to a standstill by inhibiting transportation, causing structural collapses and power outages. Repair and emoval costs were significant. In 2003 Arapahoe County was included in the Presidential Snow Emergency declaration. The county was also affected by snowstorms in 2005. The county was also included in the 2006 Presidential Snow Emergency declaration after receiving 20 inches of snowfall in a one-day period at the station near Byers.

History

2000	USDA Disaster	Drought
2002	USDA Disaster	Drought
2002	Presidential Disaster	Wildfires
2003	Presidential Emergency	Snow
2006	USDA Disaster	Heat, High Winds, Insect Pests, Late Freeze, Ongoing Drought
2006	Presidential Emergency	Snow

Potential/Current Mitigation Projects

Update land development regulations and building codes; implement/upgrade flood warning systems; critical facilities protection; severe weather shelters; continue to provide public education through brochures and handouts; regional evacuation plans

Archuleta County

Archuleta County is near the south central border of Colorado and is primarily agricultural. The county has had strong growth in the past decade; most of the recent growth is in the Greater Pagosa Springs area. Approximately two-thirds of the total county area is owned and managed by federal, state and tribal governments. In a risk assessment survey conducted by the Colorado Division of Emergency Management in 2007, county emergency management personnel identified wildfire, winterstorm, and flood as the county's most probable exposure to hazards based on probability and severity, updating wildfire from medium to high risk. Public education includes putting periodic articles in the weekly local paper regarding natural hazards by various groups including the Extension.

Navajo State Park Photo: www.parks.state.co.us

Winterstorms-Winterstorms are the county's most frequent hazard. Highway 160 traverses Wolf Creek Pass and threatens travelers with avalanche, icy roads, and white-out conditions. Heavy snow fall and winds can create drifts that close roadways, down utility lines, and isolate residents and travelers.

Flood-Flooding along the Piedra and San Juan Rivers has caused property damage throughout the past century. The Piedra River, by continually changing its course, has caused property damage in several rural areas. In 1911, the San Juan River flooded near Pagosa Springs; two people were killed and damage was estimated at $100,000. Other severe floods have been recorded in the county, one in 1911 and the other in 1970, both triggered by thunderstorms. Between 1997 and 2003, three flood events were recorded. Heavy rainfall in 1998 caused flash flooding and mudslides 15 miles east-northeast of Chromo. In 2000 heavy rains caused mud and rockslides across Highway 160 near Chimney Rock. It is estimated that over 75 homes in Archuleta County are located in a 500-year floodplain. The Pagosa Springs region of the San Juan River is classified as a high-risk flood area. Goal N-3 in the Pagosa Springs Community Plan cites "Pagosa Springs will avoid potential hazards caused by development occurring in natural hazard areas." The following communities participate in the **National Flood Insurance Program:** unincorporated Archuleta County and the City of Pagosa Springs.

Wildland/Grassland Fire-Over 50% of the land is in public ownership. Colorado State Forest Service estimated there were 57 subdivisions totaling 23,769 acres in the urban/wildland interface in 1999. In 2004, the Puma fire, on BLM and private land, burned 31 acres. Also in2004, the Montezuma Mesa fire, BIA Southern Ute Agency, burned 156 acres. In June 2002, the Missionary Ridge fire moved into the northwest corner of Archuleta County and continued burning into the month of July. Hundreds of acres were consumed. The **Archuleta County Community Fire Plan** identifies 34 areas of private lands along the urban/wildland interface thought to be at risk from wildfire. Of the 34 areas, six

Population (2000):	9,898
% Growth from 1990:	85.2%
County Size (square miles):	1,364
County Seat:	Pagosa Springs

areas of special concern have been tentatively identified. The areas are Aspen Springs (Unit 6), Log Park, Pagosa Lakes, San Juan River Resort Village, Alpine Lakes Estates, Loma Linda, Burns Canyon, Pagosa Peak Reserve, Piedra Peak, Snow Circle, Elk Park Meadows, Timber Ridge, Turkey Springs, Alpine Lakes Subdivision, Echo Canyon, Chris Mountain Estates, Blue Mountain Estates, Cimarron, Continental Estates, Eagle Peak, Alpha, Ghost Elk Valley, High West, Holiday Acres, Keyah Grande, Lower Blanco, Navajo River Ranch, Rito Blanco, Stevens Canyon, Tierra del Oro, Twin Creek, Upper Blanco, Wildflower, Mesa Cortado, and Crowley Ranch. Areas where fuels reduction were underway include Timber Ridge, Piedra Peak, Snow Circle, Elk Park Meadows, Timber Ridge/Crowley Ranch, and Pagosa Peak Reserve. The USFS had fuels reduction planned or underway near subdivisions at risk. Demonstration areas include Turkey Springs and Fawn Gulch. The county participates in the **Emergency Fire Fund**. Several entities in the county are partners in The Firewise Council of Southwest Colorado. The county has an ordinance for subdivision design standards; the county requires that developers mitigate wildfire hazards before receiving final plat approval from the Planning Office.

Drought-Drought has occurred in the area almost completely drying up the San Juan River. The lack of water storage with increased population means severe water rationing or worse in a severe drought situation. The region has experienced drought in many recent years, including 2002.

Landslide and Avalanche-Areas along Highway 160 over Wolf Creek Pass are some of the highest hazard landslide and avalanche areas in the State. A historic landslide on Highway 160 at Turkey Creek (San Juan River-Jackson Mtn) is a known active area since 1970. It has disrupted Pagosa Springs' water supply line and a natural gas line. Several times since then it has severed Highway 160 requiring closures.

History

2002	USDA Disaster	Drought
2002	Presidential Disaster	Wildfires
2006	USDA Disaster	Heat, High Winds, Insect Pests, Late Freeze, Ongoing Drought

Potential/Current Mitigation Projects

Develop evacuation, flood, fire, all hazard mitigation plans; continue periodic natural hazard articles in the paper; continue to work on wildfire risk maps; develop/sustain a public information campaign, concentrate special efforts in high risk areas; continue to use the Land Use code for maintaining momentum of wildfire management strategies on private lands; continue to pursue grants ... for fuels reduction on private lands; provide a means for county residents to dispose of slash; Pagosa Spgs-work with Archuleta County and FEMA to develop or update floodplain maps as necessary and convert data to digital formats; Pagosa Spgs-strengthen current floodplain standards to limit future development within floodplains for health and safety purposes; Pagosa Spgs-identify steep slopes and other potential hazard areas; develop standards to limit development on slopes greater than 30% or other unstable areas and require mitigation for developments in potentially hazardous areas to protect adjacent properties and future occupants of the development.

Baca County

Baca County is located in the southeast corner of the State, bordering Kansas, Oklahoma, and New Mexico. In a risk assessment survey conducted by the Colorado Office of Emergency Management in 2003/4 and the Baca County Pre-Disaster Mitigation Plan 2004, county personnel identified exposure to winterstorms, severe weather, wildland fire, and extreme heat as the county's most probable exposure to hazard.

Two Buttes Reservoir, http://wildlife.state.co.us/LandWater/StateWildlifeAreas/

Winterstorms-Heavy snow, ice, severe winter storms and blizzards are common to southeastern Colorado. Thirty-seven heavy snow events were reported between 1950 and 2004. Baca County was one of ten counties included in the presidential snow emergency declaration for the storms in December 2006. The county received a record 34 inches of snowfall in a three-day period. Many regular services were shut down for weeks and several buildings had structural damage from heavy snow load. Baca County was also one of 14 counties included in the 2001 presidential disaster declaration for severe winter storms. Over $6 million in damages were reported by the plains counties as a result of storms over two weekends. Broken power poles and downed power lines left thousands without power for days. The severe storm of 1997 resulted in two deaths and approximately $1 million in property damage. The most significant losses were livestock and crop damage.

Windstorms-Baca County is subject to significant non-tornadic winds. Thirty-four high wind events have been recorded between 05/19/1960 and 06/21/2006. These winds can disrupt daily activities, cause damage to buildings and structures, and increase the potential of other hazards. High winds in the winter can cause snow drifts and white-out conditions. A wildfire can accelerate and be rendered unpredictable by high winds. Damage from an event in 1999 caused $33,000 in damage; highest speed was 90 knots.

Tornados-According to NCDC, 60 tornados have been reported from 1955 to 2006; the largest was an F4 on 05/18/1977 that caused $2.5 million in property damage. An F2 in 2003 just west of Springfield caused damage close to $125,000. County residents have suffered close to $3 million in property damage and four injuries in 41 years.

Wildland/Grassland Fire-Causes of wildland fires include lightning strikes, unsupervised controlled burns, and sparks from breaking trains. Increased drought conditions contribute to wildland/grassland fire potential.

Population (2000):	4,517
% Growth from 1990:	-0.9%
County Size (square miles):	2,565
County Seat:	Springfield

Extreme Heat/Drought-Heat wave is often associated with periods of drought. Drought occurs when a long period passes without substantial rainfall. A heat wave combined with a drought is a dangerous situation. Agriculture is the primary economic activity in the area, therefore, Baca County's economy would be affected by an extensive period of drought. Along with the rest of the region, Baca County experienced significant drought in the early 2000s.

Hail-Over 121 days, 190 hail events were reported in Baca County between 1955 and 2006. A hailstorm on September 24, 2004 in the Springfield area was reported to have caused $100,000 in property damage. A hailstorm on June 16, 2006 in the Campo area was reported to have done $50,000 in property damage. According to the National Climatic Data Center database, a hailstorm on 05/17/2001, located five miles southwest of Campo, had hailstones up to 4.5 inches

Flood-Two areas identified in the plan are the western sections of Springfield and the southern end of Walsh. Both towns are in the Bear Creek watershed. From 1994-2003, seven flood events were recorded (NCDC). The small stream urban flood event in Walsh in 1995 was part of a state declaration; 2.60 inches of rain fell in a 45-minute period resulting in office building and street flooding. Two to four inches of rain from slow moving thunderstorms in 1997 flooded roads north of Springfield; the county was included in a federal disaster declaration. Baca County received Public Assistance funds. Carrizo Creek and Cimarron River tributaries have localized nuisance flooding in summer. During flood events, county roads and bridges were seriously damaged.

There is one Class I dam in the county; it has an emergency preparedness plan in place. The following communities participate in the **National Flood Insurance Program**: unincorporated Baca County and the Town of Walsh.

History

1995	State Disaster	Flooding
1997	Presidential Disaster	Flooding
2001	Presidential Disaster	Winter Storms
2002	USDA Disaster	Drought
2002	Presidential Disaster	Wildfires
2006	Presidential Emergency	Snow
2006	USDA Disaster	Drought, Fire, Heat, High Winds

Potential/Current Mitigation Projects

Flood mitigation plans and inundation maps; community wildfire protection plans; local hazard mitigation plans; tornado and severe weather safe rooms; outdoor warning system; tornado sirens; generators and backup power sources for public buildings; protective measures for water and sanitary sewer systems; retrofitting (structural and nonstructural) public or private structures for protection against wind, wildfire, or earthquakes; continuity of operations; protection of emergency equipment; strategic shut-off in electric, gas, and petroleum distribution systems; protect individual houses and properties from flooding; floodproofing; increase public awareness; brochures; erosion and sediment control; StormReady; NOAA weather radios; crop insurance

Bent County

Bent County is located in southeast Colorado. The southern portion contains bluffs, mesas and canyons that open to the rolling plains of the Arkansas River Valley. The Arkansas River runs from west to east in the north. The northern part of Bent County is a series of rolling plains that slope south to the Arkansas River.

The 2002 Bent County/City of Las Animas Comprehensive Plan (Plan) provides the county and city with a tool for guiding land use and future growth decisions. It was prepared in accordance with C.R.S. 30-28-107. Although the Plan is advisory, it is the basis for regulatory measures inclusive of zoning, subdivision, and other land use code updates, and project review recommendations. Relevant parts include "Environment and Natural Resources" and "Land Use and Economic Development". Hazards include soils, steep slopes, floodplains, drought, and weather. Policies and actions that address land use and hazards are included. It recommends that county and city staff, planning commissions, county commissioners and city council consult it when considering development proposals, updating regulations, etc. It recommends the Plan should be used to guide residents, landowners, and project applicants concerning land planning and community development objectives within the county and city.

John Martin Reservoir Photo: www.parks.state.co.us

Flood-Bodies of water include John Martin, Horse Creek, and Adobe Creek Reservoirs, and Hasty, Long, Denny, and Heinan Lakes. There are two Class I dams; both have emergency plans. The Arkansas River runs from west to east in the north; tributaries are Horse, Adobe, Gageby, Limestone, and Graveyard Creeks. The Purgatoire River runs from the southwest flowing northeast and converges with the Arkansas east of Las Animas. Rule, Caddoa, and Mud Creeks drain the south. The Plan does not recommend development along streams and dry wash channels "in order to minimize increases in downstream flood elevation, potential life or safety hazards, and property damage".

After a flood event in 1921, several future events were avoided in 1936, 1955, 1957 and 1965 through construction of emergency levees around Las Animas. In 1978, a nine-mile levee was constructed, reducing flood hazard by the Arkansas River. Between 1994 and 2003, six flood events were reported. The county experienced heavy rains and flooding in 1999 that caused damage to infrastructure and crops. The heavy rain led to widespread river flooding, especially along the Arkansas River. Bent was included in the presidential disaster declaration and received Public and Individual Assistance. In the Plan, the following "Environment Policies", among others, are listed: building on flood lands or in other areas poorly suited for building or construction in the county and city shall be restricted and all new development in the county and city shall have adequate drainage.

Population (2000):	5,998
% Growth from 1990:	18.8%
County Size (square miles):	1,517
County Seat:	Las Animas

Steep Slopes-A steep slope analysis is in the Plan. There are many areas, particularly in the southern portion of the county where bluffs, mesas and canyons have slopes in excess of 15 percent. The Plan discourages future development on these slopes.

Tornados-From 1956 to 2004, 33 tornados over 23 days, $1.4 million in damages, and eight injuries were reported.

Hail-From 1958 to 7/31/2006, 84 events were recorded. A significant event occurred in 2001 in Ft. Lyon, resulting in $9 million in property and crop damage. The county is vulnerable to hail due to its agricultural nature. In 1997, hail of up to 4.5 inches was measured.

Winterstorm-Average annual snowfall is 19.7 inches. Winterstorms affect travelers, including Highways 50 and 101. Between 1950 and 2004, 39 heavy snow events were recorded. Power outages and snowpacked roadways isolate many residents. In 1979, Bent County experienced a severe winterstorm that received a State disaster declaration. Bent County was one of 14 counties included in the May 2001 presidential disaster declaration for spring storms. Over $6 million in damages were reported by the plains counties from storms over two weekends. Broken power poles and downed power lines left thousands without power for days. Bent County was one of ten counties included in the December 2006 presidential emergency declaration for record snowfall. The area received just under three feet of snow in three days.

Drought-Due to its agricultural nature the county is economically vulnerable to drought. The Arkansas Valley Water Preservation group has formed a private corporation to buy water rights to prevent rights from being sold outside the county.

Thunderstorms and High Winds-One death, one injury, and $80,000 in damage were reported from a damaging microburst wind, estimated to be at least 115 mph.

History

1979	State	Blizzard
1995	State	Flooding
1997	State	Winter
1999	Presidential Disaster	Flooding, Mudslides, Landslides
2000	USDA Disaster	Drought
2001	Presidential Disaster	Winter Storms
2002	Presidential Disaster	Wildfires
2004	USDA Disaster	Hail, Wind, Rain
2006	Presidential Emergency	Snow
2006	USDA Disaster	Heat, High Winds, Insect Pests, Late Freeze, Ongoing Drought

Potential/Current Mitigation Projects

Flood, wildfire, and local hazard mitigation plans; Tornado and severe weather shelters; warning systems; Environment Actions (Plan) include: Work with Crowley, Otero, Prowers, and Pueblo counties and the Southeast Colorado Water Conservation Board to study water resources in the Lower Arkansas River Basin and retain water for the beneficial use of Bent County; Create regulations and incentives to address irrigation water retention and water loss mitigation; Update subdivision regulations to create standards limiting development on flood lands and poor soils and updating regulations to strengthen drainage system requirements.

Boulder County

Boulder County is located 40 miles northwest of Denver. The area's topography includes the foothills in the west and the plains in the east. Boulder County's risk assessment is included in the **Denver Region Natural Hazard Mitigation Plan**. Through the risk assessment process, the county identified drought, flood, thunderstorms (tornado/hail/lightning), and winter storms as the hazards that pose the greatest risk.

Eldorado Canyon State Park, Photo: www.parks.state.co.us

Drought-2002 was the driest year on record for the region. Longmont has the 2007 Water Supply & Drought Management Plan. The city's policy is to use the 1-in-100 year drought recurrence interval as the basis of planning for the raw water supply. This has been determined to be approximately 7 years in length with a total Saint Vrain Creek watershed deficit of 237,000 acre-feet. The community uses strategies like a diverse water rights portfolio, public education, water conservation, and best management practicess. Boulder has the City of Boulder, Colorado Drought Plan. Using the Orodell gage on Boulder Creek, 2002 was the worst single year on record for flow deficit.

Flood-Between 1994 and 2005, seven flood events were recorded. Jamestown has had flash flood/mudslide events in 2004 and 2005 in the Overland burn area. In 1997, heavy rain and hail triggered a flash flood that damaged 10 buildings on the University of Colorado campus. The water damage caused approximately $100,000 in damages. The county's flood mitigation efforts have been in place for many years. Codes and ordinances have been adopted prohibiting or controlling building in floodplains. Mitigation efforts, such as channelization and detention ponds, have been built and some high-risk buildings located in floodplains have been removed. A flood warning system, made up of stream and rain gauges, is in drainages. These gauges, connected to a computer in the Boulder Regional Communications Center, sound an alarm when significant amounts of rainfall are recorded. Through the risk assessment process, approximately 8,000 households and 240 businesses were identified as having a high to very-high exposure to flood hazard. The following communities participate in the **National Flood Insurance Program**: unincorporated Boulder County, Boulder, Lafayette, Longmont, Louisville, Jamestown, Lyons, Nederland and Superior. According to the 2003 **Community Rating System** List of Eligible Communities, Boulder County and the cities of Longmont and Boulder each have a community rating of eight, Lousiville is rated nine. There are 23 Class I and 17 Class II dams. Part of the county is served by the Urban Drainage and Flood Control District.

Thunderstorm and High Winds-Between 1957 and 2006, 135 thunderstorm and high wind events were recorded. One fatality, 23 injuries and $35 million in damages were attributed.

Mudslides-Two months after the Black Tiger wildfire, heavy rain and hail caused a mudslide in Boulder Canyon destroying one home. The same storm caused hail damage in Boulder and Lafayette, a forest fire in Coal Creek Canyon, and power outages in the county. Jamestown has had flash flood/mudslide events in 2004 and 2005 in the Overland burn area.

Population (2000):	291,288
% Growth from 1990:	29.3%
County Size (square miles):	750
County Seat:	Boulder

Hail-In July 1990, a severe hailstorm caused massive hail damage, localized flooding and rockslides on Highway 119 at the mouth of Boulder Canyon. Between 1962 and 2006, 158 hailstorms were recorded; seven injuries were attributed.

Lightning-Between 1980 and 2002, 17 events resulted in 16 injuries and four deaths. One strike in 1994 caused a major fire; damages were $5 million.

Winterstorms-Winterstorms pose a high risk to residents in the foothills. Significant storms over the past few years include March 2003 (over six feet of snow), March 1992 (20 inches), March 1990 (24 inches), December 1982 (24 inches), and December 1987 (over 24 inches). Boulder County was included in both the 2003 and 2006 Presidential Emergency declarations for snowfall.

Wildland/Grassland Fire-In a 1999 report, the Colorado State Forest Service reported that 84 subdivisions, totaling 17,025 acres, were in the WUI. Through the risk assessment process 23,700 households and 2,700 businesses were identified as having a high exposure. The Boulder County Board of County Commissioners established the Boulder County Wildfire Mitigation Group; the mission is to discuss and coordinate mitigation actions. The Wildfire Hazard Identification and Mitigation System was developed and is used as a model. Other mitigation measures include promoting the FireWise public information campaign, adopting Wildfire Hazard Overlay Zoning Districts, and requiring defensible space, timber fuel reduction, fire resistant building materials, water supplies and improved access in new and existing residential developments. The county participates in the **Emergency Fire Fund**. The Lefthand, Gold Hill, Four Mile, and Boulder Mountain Fire Protection Districts have **Community Wildfire Protection Plans.** There is a **Boulder County Wildfire Mitigation Group.** Communities ranked extreme and very high risk include: Lefthand Canyon; Boulder Mountain; Gold Hill-Town of Gold Hill, Gold Run Subdivision, Rowena and Snowbound area; Four Mile-Rim Road Area, Logan Mill, Wallstreet, Summerville, Emerson Gulch, Arroyo Chico; and Indian Hills-Upper Indian Hills, Lower Indian Hills, and the 285 Area. Genesee is a **FireWise** community. Boulder has a wildfire mitigation officer. Boulder has subdivision regulations.

History

1989	Local	Wildfire
1990	Local	Wildfire
1994	Local	Flooding
1995	State	Flooding
1998	Local	Wildfire
2000	USDA Disaster	Drought
2001	State	Severe Weather
2002	Presidential Disaster	Wildfire
2002	USDA Disaster	Drought
2003	Presidential Emergency	Snow
2006	Presidential Emergency	Snow
2006	USDA Disaster	Heat, High Winds, Insect Pests, Late Freeze, Ongoing Drought

Potential/Current Mitigation Projects

Natural hazard mitigation plans; community wildfire protection plans; flood plans; University of Colorado at Boulder flood mitigation project to protect housing & move campus utilities; prescribed burns; develop shelter-in-place areas; public education; defensible space; fuel mitigation projects as listed in CWPPs

Broomfield County

Broomfield is a suburb of Denver and is located northwest of the metro area. Broomfield became a county in 2001. Prior to this the City of Broomfield boundaries were spread across four other counties; Adams, Jefferson, Boulder and Weld. Historical hazard statistics are therefore difficult to report. Broomfield County participated in the development of and is included in the **Denver Region Natural Hazard Mitigation Plan**. Through the risk assessment process, the county identified drought, thunderstorm and hail as the hazards that pose the greatest possible risk.

http://www.ci.broomfield.co.us/community.shtml

Drought-Broomfield County has experienced drought for the last four years. 2002 was the driest year on record for the region and much of the State.

Thunderstorm-Severe thunderstorms are identified as a high hazard. Lightning is the most dangerous and frequently encountered weather hazard that most people experience each year.

Hail-Between 1955 and 2005, 22 hail events were recorded in the city, then county.

Flood-The hazard identification and risk assessment identified the following: there are approximately five households and five businesses exposed to flood hazard. The city/county is served by the Urban Drainage and Flood Control District.

Winterstorms-The City and County of Broomfield was declared for Presidential Emergency snow declarations in both March 2003 and December 2006.

History

2002	Presidential Disaster	Wildfires
2003	Presidential Emergency	Snow
2006	Presidential Emergency	Snow
2006	USDA Disaster	Drought, Fire, Heat, High Winds

Population (2000):	38,272
% Growth from 1990:	NA
County Size (square miles):	34
County Seat:	Broomfield

Potential/Current Mitigation Projects

Local hazard mitigation plan, projects as defined in The Big Dry Creek North Area Tributaries Outfall Systems Plan Update

Chaffee County √

Chaffee County is located near the center of the State. The County is located in a basin surrounded by mountainous terrain and has an economic base of agriculture and outdoor recreational activities. Chaffee County participated in the development of and is included in the **Upper Arkansas Area Council of Governments Hazard Mitigation Plan**. Through the hazard identification and risk assessment process the county identified wildland fire and drought as the hazards that pose greatest risk.

A Chaffee County fourteener. Photo by Marilyn Gally.

Drought-The drought of 2002 exposed the vulnerability of the Upper Arkansas Area. By the time summer arrived, the Upper Arkansas River was running well below normal flow levels. The low water, in addition to the nationally publicized drought, caused many people to cancel pre-planned river trips and tourism to the region.

Wildland/Grassland Fire-With the mountains as a key attraction to the area, a major wildland fire could destroy one of the most important aspects of the region. The entire economy of the region could be literally changed overnight if a wildland fire spread through the area. The Colorado State Forest Service reported that in 1999 there were 70 subdivisions totaling 121,254 acres in the urban/wildland interface. The county participates in the **Emergency Fire Fund.** Chaffee County has a Community Wildfire Protection Plan in progress. One project in the Westside Project Area is a fuels reduction corridor. Several treatment areas have been completed.

Flood-Two rivers flow through Chaffee County and are listed as high-risk flood areas: the Arkansas and the South Arkansas. These rivers flow near or through several communities including Buena Vista and Salida. There are also two major creeks that pass through settled areas. Cottonwood Creek goes through Buena Vista and Chalk Creek passes through the camping area and homes in the Nathrop area. Poncha Creek passes through Poncha Springs. There were two recent flash flood events in the Buena Vista area: July 2002 and August 2004. The flash flood events led to mudslides.

There are one Class I and two Class II dams located in the county. The Class I dam has an emergency preparedness plan. The following communities participate in the **National Flood**

Population (2000):	16,242
% Growth from 1990:	28.1%
County Size (square miles):	1,039
County Seat:	Salida

Insurance Program: Chaffee County (unincorporated), the Town of Buena Vista, the Town of Poncha Springs, and the City of Salida.

Avalanche-In 2003 and 2004, three deaths occurred as a result of avalanches in the county.

Mudslides-Mudslides resulting from a flash flood event in July 2002 affected CR 306 (Cottonwood Pass Road) and CR 162 (Chalk Creek drainage area). Approximately $100,000 in property damage occurred. Two injuries were reported on CR 306 as two passengers suffered hypothermia and abrasions when mud and rock flowed into their vehicle. Five mudslides occurred from a flash flood event on Cottonwood Pass Road (CR 306) in August 2004. Mud was two to 14 feet deep. As a precautionary measure, Cottonwood Hot Springs and several private homes were evacuated. On July 21, 2007 a devastating mudslide affected the area of Alpine. It was determined that three residences sustained minor damage and another 14 homes were affected. Damages to county roads and electric utilities were estimated at approximately $33,000.

Lightning-One death occurred from a lightning event in 1995 on Mount Princeton. An injury was reported from a lightning event in the Monarch area in 2004. Lightning in July 2003 caused a reported $52,000 in property and crop damages near Salida and approximately $50,000 in property damage was reported near Buena Vista in 2005.

Winterstorms-Chaffee County was included in the Presidential Emergency declaration for record snowfall during the March 2003 storm.

Tornado-An F0 tornado was recorded on May 5, 1991. Approximately $25,000 in property damages were reported.

Thunderstorm/High Winds-Twenty events were reported between 06/07/1978 and 09/16/2006.

History

2002	Presidential Disaster	Wildfires
2003	Presidential Emergency	Snow
2006	USDA Disaster	Drought, Fire, Heat, High Winds

Potential/Current Mitigation Projects

Improve the defensibility of residential and commercial properties against wildfire; reduce the fuel load at strategic locations in the wildland urban interface; reduce the vulnerability of municipal water supplies through public education; establish a storm water management plan; improve early notification capabilities for winter storm events; reduce the vulnerability of community assets to flash floods by improving the administration of FEMA flood-hazard areas

Cheyenne County √

Population (2000):	2,231
% Growth from 1990:	-6.9%
County Size (square miles):	1,772
County Seat:	Cheyenne Wells

Cheyenne County is located along the east central border of the State and has a low population density. Cheyenne County participated in the development and is included in the **Northeastern Colorado Emergency Management Association Hazard Mitigation Plan**. Through the assessment process, the county identified winter and summer storm exposure as the greatest risks. Cheyenne County has received a **StormReady** designation. For warning systems, the county has EAS/Reverse 911, a siren system in Cheyenne Wells, public address systems with the responding agencies, NOAA radio network, cable over-ride and local radio. Incorporated communities are updating the evacuation plans. Public education includes Weather Spotter Training, an extensive 72-hour preparedness program, and extensive safety programs for all of the schools in the county, civic groups, church groups and various community educational programs in place and presented at regular intervals. The county has distributed over 200 NOAA radios to all public places, government offices, schools, daycare homes, shut in and handicapped citizens, hospitals, and confined living facilities.

Winterstorms-Per NCDC, twenty-eight snow and ice events have affected the area between 1998 and 7/31/2006. In 1980, the area experienced a winter storm so severe a state disaster was declared. On October 24, 1997, a blizzard hit the county and caused the deaths of many livestock. Travelers on Highways 385, 287, 59, and 40 become stranded, requiring search and rescue efforts. Due to severe spring snowstorms in April 2001, Cheyenne County was one of fourteen counties included in the May 2001 presidential disaster declaration. Over $6 million in damages were incurred by the eastern counties as a result of storms over two weekends. Broken power poles and downed power lines left thousands without power for days. In December 2006, Cheyenne County received a Presidential Emergency declaration for snow. The east portion of the county was hit hardest receiving approximately three feet of snow.

Tornados-Severe summer storms and their associated risks such as tornados and flooding, are considered the primary hazard confronting this county. During the months of May, June, and July, tornados and severe thunderstorms are frequent. Tornado touchdowns have been documented near Cheyenne Wells, Kit Carson, Wild Horse, and First View. Four funnel clouds and 44 tornadoes have been reported from 1955 to 2004. An F2 tornado caused $2.5 million in property damage in 1979. Five injuries have been reported resulting from a tornado in 1958. The Emergency preparedness group is working with the school to utilize the shelter to its potential.

Hail-Hail events are frequent in Cheyenne County; 268 are recorded from 1/1/1950 to 7/31/2006. In a storm in June 1989, hailstones were recorded up to 4.5 inches; in August 2001, hailstones were recorded up to 3.75 inches.

High Winds-Ninety-nine high-wind events, including dry microbursts, thunderstorm winds, and high winds, have been recorded between 1956 and 7/31/2006. A mobile home was flipped over near Wildhorse from high winds in April 2007.

Flood-Seven flood events have been reported between 1950 and 2003. Flooding of Wild Horse Creek and Smokey Hill River could occur in the communities of Cheyenne Wells and Kit Carson. The county was included in a presidential flood declaration on August 21, 1997 due to damage caused by heavy rains in the vicinity of Wildhorse. The county received Public Assistance funding to repair damages to infrastructure. Several times in the past decade, floodwater has affected Highway 40. The Town of Kit Carson has recognized the potential for serious flooding in their jurisdiction, and passed an ordinance to restrict growth in that area. All of the communities have worked with county officials on updating drainage capabilities of the towns.

Drought-Due to its strong agricultural base, nearly the entire county could be affected by drought. Water shortages could adversely affect irrigation, community water systems, and fire fighting abilities. Recent years 2000 and 2002 were particularly difficult for those with agricultural interests.

Wild/Grassland Fire-Grass fires are common along the railroad tracks, wheat fields, and in the prairies. In 2002, the Cheyenne County Complex fire burned 15,000 acres.

History

1965	Presidential	Flooding
1980	State	Blizzard
1997	Presidential Disaster	Flooding
2001	Presidential Disaster	Winter Storms
2002	Presidential Disaster	Wildfires
2002	USDA Disaster	Drought
2006	USDA Disaster	Drought, Fire, Heat, High Winds
2006	Presidential Emergency	Snow

Potential/Current Mitigation Projects

Continue promotion of crop insurance; provide reverse 9-1-1 education; promote enrollment into the NFIP for Kit Carson; purchase and distribute more NOAA weather radios; update hazard mitigation plan; tornado and severe weather shelters; distribute more 72-hour kits; flood plans; update local hazard mitigation plan; implementing some upgrades for the school shelter, such as portable lights and generated power; self contained underground shelters for ball parks, trailer parks, camp grounds, and other areas that have no shelter; lightning rods to be placed at the swimming pools; public education

Clear Creek County √

Clear Creek County
Photo by David C. Marlin

Clear Creek County is located west of the Denver metro area along the I-70 corridor. The county participated in the development of and is included in the **Denver Region Natural Hazard Mitigation Plan**. Through the assessment process, the county identified avalanche, drought, flood, hail, landslide, winterstorm, and thunderstorm as their greatest risks. Clear Creek County was selected and served as a successful **Project Impact** community.

Population (2000):	9,322
% Growth from 1990:	22.4%
County Size (square miles):	394
County Seat:	Georgetown

Avalanche-Is a natural hazard that is unique to mountainous cities and counties in the region. Several major transportation corridors in Clear Creek County lie within major avalanche path areas. Interstate 70 (I-70), in Clear Creek County, west of Georgetown, places the most individuals and freight haulers at risk. In February 2004, one death was recorded as a result of an avalanche near Loveland Pass.

Drought-Clear Creek County has experienced drought conditions several years in the past decade. 2002 was the driest year on record for the region.

Flood-Several flood events have been recorded in Clear Creek County between 1994 and 2004. Two creeks within the county are listed as high-risk flood areas: Clear Creek and Tucker Gulch. The mountainous terrain and deep canyons that these creeks flow through enhances the chance of flash flooding, posing an extreme hazard. Virginia Canyon is also a very high risk. In August of 1994, as a result of a flosh flood, rock and debris caused the closure of Virginia Canyon Road between Idaho Springs and Central City. In July 1998, torrential rainfall triggered flash floods in Virginia Canyon; Virginia Canyon Road was closed for two days to clear off debris from mudslides. Several cars in Idaho Springs were washed off the road and numerous basements in town were flooded. Several times in July and August 2004, Virginia Canyon was subjected to flash flooding resulting in minor damage and costly debris removal. Through the hazard identification and risk assessment process, approximately 300 households and 100 businesses have been identified as high risk for flooding.

The following communities participate in the **National Flood Insurance Program**: Clear Creek County, Georgetown, Idaho Springs, and Silver Plume.

Hail-Nine hail events were recorded between 1971 and 1998.

Landslides-Due to steep slopes on the sides of I-70, mudslides and rockfalls are common and have temporarily closed the interstate many times. The Clear Creek Forks landslide area is considered a high priority area and has a history of intermittent, slow movement dating back to the mid 1940's. With a well dcoumented history of recent movement, this area is considered a major and potentially very dan-gerous rockslide area. Interstate 70 east of Hwy 6 is also a rock debris slide ares that has been active at least since the I-70 construction about 35 years ago. It has required periodic ongoing roadway cleanup and repair. The Georgetown Incline rockfall area on I-70 is considered an extreme hazard to westbound lands of I-70 on the steep grade berween George-town and Silver Plume. There are many rockfall events and occasional debris flows onto the roadway each year that have caused damage, injuries and few fatalities over the past several years. Through the hazard identification and risk assessment process 200 households and 10 businesses were identified as having a high risk of landslide.

Winterstorms-Heavy snow, ice, severe winterstorms and blizzards are common to Clear Creek County. Heavy snows can bring a community to a standstill by inhibiting transportation, knocking down utility lines and by causing structural collapse. Repair and snow removal costs can be significant. Many counties such as Clear Creek end up sheltering travellers as highways close and motel rooms reach capacity. During the 2003 blizzard, Clear Creek County received over six feet of snow.

Wildland/Grassland Fire-Colorado State Forest Service figures show in 1999 there were 22 subdivisions in the urban/wildland interface. There are about 3,500 households and 600 businesses exposed to a high risk of wildfire. The county participates in the **Emergency Fire Fund**.

Lightning-Five injuries were attributed to lightning between 2000 and 2003. In 1994, lightning severely damaged a television station transmitter located on Squaw Mountain.

History

1997	Presidential Disaster	Flooding
2000	USDA Disaster	Drought
2002	USDA Disaster	Drought
2002	Presidential Disaster	Wildfires
2003	Presidential Emergency	Snow

Potential/Current Mitigation Projects
Floodproofing; Virginia Canyon drainage improvements; sewer backup protection; acquisition or relocation; building elevation; rockfall mitigation along I-25

Conejos County

Conejos County is located in the San Luis Valley, in south central Colorado. Conejos County entered the **Project Impact** Program with five other counties from the San Luis Valley in 2000.

Flood-La Jara Creek is a designated high-risk flood area in Conejos County. Other rivers with a history of flooding include the Alamosa, Conejos, San Antonio, Rio Grande, and the La Jara Rivers. Although not listed as a high-risk area, the Conejos River has caused minor flooding several times; the most recent in 1994 when several residents of Manassa suffered flood damage resulting in $50,000 in property damage. The high water table aggravates flooding in the area.

The following communities participate in the National Flood Insurance Program: Conejos County (unincorporated areas), the Cities of Antonito and Manassa, and the Town of La Jara.

There are two Class I dams located in Conejos County, both have emergency preparedness plans in place. In addition, there are two Class II dams.

Winterstorm-Winterstorms pose a serious hazard to Conejos County. During the winter of 1993, a severe storm closed most roads and brought emergency response services to a standstill. The rural setting can contribute to isolation of many people during severe storms.

Earthquake-Conejos County is located on the Rio Grande Rift, a fault that stretches from Mexico to Canada. Although only mild earthquakes have been recorded, the possibility of a severe earthquake exists.

Wildland/Grassland Fire-Drought increases the risk of wildfire throughout Conejos County. Colorado State Forest Service figures show that in 1999 one subdivision, totaling 200 acres, was identified as being in the urban/wildland interface. Sheep Creek Landowners Association and Posada Del Rio, LLLP have a Community Wildfire Protection Plan in progress.

Tornado-Four tornados have been recorded in the county: 1953, 1990, and two in 2005. The 1990 event caused $25,000 in damages.

Lightning-In 1993 lightning struck a water plant near Antonito, travelling along the pipeline, and finally breaking the pipeline. Approximately 5,000 gallons were lost. Damage was $50,000.

History

1993	State	Flooding
1993	County	High Water, Flooding, Rain
1995	State	Flooding
2000	USDA Disaster	Drought
2002	USDA Disaster	Drought
2002	Presidential Disaster	Wildfires
2006	USDA Disaster	Drought, Fire, Heat, High Winds

Population (2000):	8,400
% Growth from 1990:	12.7%
County Size (square miles):	1,269
County Seat:	Antonito

Potential/Current Mitigation Projects

Local hazard mitigation plan; community wildfire protection plans; flood mitigation plans; projects as identified in the plans

Costilla County

Costilla County is located in the San Luis Valley, in the south central area of the State. Costilla County entered the **Project Impact** Program with five other counties from the San Luis Valley in 2000. A mitigation project was completed to protect a historic adobe structure from being destroyed by water. The county just finished their Multi-Jurisdictional Multi-Hazard Mitigation Plan. Participants listed the hazard levels as significant for wildfire, drought, and severe winter storms.

San Luis, Costilla County Photo by Marilyn Gally

Winterstorm- Like most mountain areas, Costilla County is especially vulnerable to winter storms. Heavy snows bring a community to a stand still by inhibiting transportation, knocking down utility lines and by causing structural collapse. Visitors and travelers often become stranded and must be rescued. In April 2003, Costilla County was one of 29 counties included in a Presidential Emergency declaration for record snowfall.

Flood-In the spring and summer, storms can cause flooding, high winds and tornados. Residents of Costilla County are especially vulnerable to floods because mand of the older communities were built in flood prone areas. A high water table compounds the problem. Many homes are constructed of adobe (adobe bricks turn to mud when exposed to excessive moisture). The following communities participate in the **National Flood Insurance Program**: Costilla County (unincorporated areas) and the Town of San Luis.

There are two Class I dams located within the county. Both have emergency preparedness plans in place. Sanchez Dam developed a large sinkhole in 1992; mitigation work by the Army Corp of Engineers, the county, and other agencies was successful in stabilizing the dam.

Tornado-Five tornadic events have been recorded in the county between 1955 and 1995. Most tornados have been in open-country and have caused minimal damage. An F3 tornado was reported in 1955.

Hail-Five hail events were recorded from 1959 to 2005. In August 1996, strong winds combined with a great volume of hail produced extensive damage to structures causing $450,000 in property damage and $250,000 in crop damage.

Earthquake-Costilla County is located on the Rio Grande Rift and the Rito Seco Fault. A large earthquake could cause serious damage.

Population (2000):	3,663
% Growth from 1990:	14.8%
County Size (square miles):	1,215
County Seat:	San Luis

Wildfire-The Colorado State Forest Service reported in 1999 there were four subdivisions, totaling 46,000 acres, in the urban/wildland interface. In June 2006, Costilla County experienced the Mato Vega Fire. The fire started June 18, 2006 and burned approximately 14,000 acres in the Forbes Trinchera Ranch area over the next two weeks. It was all private property. It burned a mixed conifer forest, some sage brush and aspen. Several subdivisions were in danger but no structures were lost. The fire went EFF (Emergency Fire fund) on the first evening and totaled approximately $3.9 million. This fire was managed by a Type 2 Incident Management Team beginning the second afternoon. The following subdivisions have been identified by the State Forest Service as having homes in the red zone: R Ranch, Elk Park, Forbes Park, Forbes Wagon Creek Ranches, Little Norway, M & M Ranches, Melby Ranch, Sangre de Cristo Ranches, and Wild Horse Mesa.

Forbes Wagon Creek has a **Community Wildfire Protection Plan**. The Colorado State Forest Service has assisted with significant projects in the Wagon Creek and Forbes Park subdivisions. Both have thinned fuels along roadways and around structures and removed slash material by burning piles or chipping. The county participates in the **Emergency Fire Fund**.

History

2002	Presidential Disaster	Wildfires
2002	USDA Disaster	Drought
2003	Presidential Emergency	Snow
2006	USDA Disaster	Drought, Fire, Heat, High Winds

Potential/Current Mitigation Projects

Replace glass in public safety buildings in the county jurisdictions with impact resistant glass; evaluate schools' resistance to all hazards; evaluate community facilities for resistance to wind, fire, landslide; and flood; sign retrofitting for wind resistance; utility mitigation; strengthen and enforce inspection and maintenance programs for private infrastructure facilities; hazard-proof new community facilities; improve stormwater infrastructure; identify and map landslide activity; reduce flood hazards at railroad stream crossings; replace culvert stream crossings with bridges to reduce flood hazards; expand the use of stormwater retention/detention facilities; update/develop flood hazard reduction plans; assess dams and reservoirs; update drainage capabilities; maintenance of waterways; update floodplain ordinances; target repetitive loss properties for educational outreach and mitigation activities; train employees on mitigation, regulations, and management and enforcement; evaluate the BC of a freeboard requirement; encourage communities to join CRS; increase public education, workshops, and outreach programs; tie into existing education programs; identify measures to reduce drought; develop materials for businesses on general preparedness and mitigation; evacuation plans; identify space to safely store animals; wildfire mitigation projects; drought preparedness and response; heating centers and emergency shelters; increase detection and warning capabillities; seismic hazard mapping; investigate seismic infrastructure hardening and bridge strengthening; identify locations for potential tree limb removal; identify locations for potential burial of utillity lines.

Crowley County

Crowley County is located in the southeast region of the State. This is a sparsely populated area that lacks basic services and shelter for stranded motorists. This often necessitates search and rescue efforts and sheltering/medical assistance for victims.

Population (2000 census):	5,518
% Growth from 1990:	39.8%
County Size (square miles):	803
County Seat:	Ordway

Floodproofed Historic Building Photo by Marilyn Gally

Winterstorms-The rural setting of the county contributes to problems from winter storms. Thirty-one heavy snow events have occured between 1993 and 2004. Travelers along Highways 96 and 71 are often affected by storm conditions. An extensive blizzard on October 24, 1997 killed livestock and caused property damage. Due to severe spring snowstorms in April 2001, Crowley County was one of 14 counties included in the May 2001 presidential disaster declaration. The plains counties incurred over $6 million dollars in property and crop damages as a result of storms over two weekends. Broken power poles and downed power lines left thousands without power for days.

Crowley County was one of ten counties included in the Presidential emergency declaration for record snowfall for the December 28-31, 2006 snowstorm.

Flood-Between 1995 and 2004, four flood events were recorded in the county. In a flood event in August 2004, slow moving thunderstorms caused heavy rain that flooded and closed Highway 96 for a time and flooded basements. Some basements reported having more than four feet of water, which destroyed approximately $30,000 in personal effects. Several homes were evacuated just east of Sugar City. Crowley County was included in a presidential disaster declaration in 1999 due to heavy rains and flooding. The county suffered damage to infrastructure and received Public Assistance funds to help with recovery efforts.

The county successfully competed for hazard mitigation funds and has floodproofed a historic public building.

The following communities participate in the **National Flood Insurance Program**: the City of Crowley and the Town of Ordway.

There are no Class I dams located in the county. There are two Class II dams.

Tornados-Tornados occur in and around Olney Springs and Ordway. Thirteen tornados were reported between 1951 and 2004. Several reported tornados were F2 in magnitude. Damages were in excess of $28,000.

Thunderstorm and high winds-Twenty thunderstorms and high wind events were recorded between 1955 and 2006. Five injuries and $10,000 in damages were associated with these storms.

Hail-Forty-six hail events occurred between 1961 and 2005.

Potential/Current Mitigation Projects
Local hazard mitigation plan; flood mitigation plans; projects as identified in the plans

History

1997	State	Blizzard
1999	Presidential Disaster	Flooding, Mudslides, Landslides
2000	USDA Disaster	Drought
2001	USDA Disaster	Drought
2001	Presidential Disaster	Winter Storms
2002	Presidential Disaster	Wildfires
2005	USDA Disaster	Drought, Wind, Hail, Heavy Rain
2006	Presidential Emergency	Snow
2006	USDA Disaster	Heat, High Winds, Insect Pests, Late Freeze, Ongoing Drought

Custer County √

Custer County is located in the south central region of the State. The area is extremely diverse with mountain peaks rising above 14,000 feet to the valley floor dropping to 5,000 feet. Custer County participated in the development of and is included in the **Upper Arkansas Area Council of Governments Hazard Mitigation Plan**. Through the hazard identification and risk assessment process, the county identified wildland fire, flood, and drought as the hazards that pose the greatest possible risk.

Custer County Photo by Marilyn Gally

Flood-Three flood events were recorded in Custer County between 1998 and 2003. A flash flood in July 2003 flooded the library and the health clinic in Westcliffe. The health clinic is a critical facility; it is the only health care facility in the area. Water up to one foot deep was reported in roadways in Westcliffe and Silver Cliff. The event caused $20,000 in property damage. The county experienced heavy rains in 1999 and was included in a presidential disaster declaration. The county received Public Assistance funds to pay for damaged infrastructure due to flooding.

In July 2005 a heavy rain caused a flash flood on the Mason Gulch burn area near Wetmore. Flooding again occurred in that burn area in August. Another flash flood occurred five miles SSE of Wetmore in July 2006.

The section of Grape Creek flowing through the town of Westcliffe is the only designated high-risk flood area in Custer County. This does not mean that flooding could not, or has not, occurred in other creeks and drainages. In 2003 the Board of County Commissioners for Custer County passed a resolution to participate in the National Flood Insurance Program. There is one class I dam.

Wildland/Grassland Fire-In Custer County, on average six to 12 wildfires occur each year, mostly on Bureau of Land Management or National Forest Service land. The Colorado State Forest Service determined in 1999 that there were 37 subdivisions, totaling 25,000 acres, in the urban/wildland interface. In June 2006 the Tyndall Gulch Fire burned over 400 acres of private lands and about 40 acres of BLM lands. Fuels consisted primarily of ponderosa pine, Douglas-fir and mixed brush. The Mason Gulch Fire in Custer and Pueblo Counties in June 2005 burned over 13,000 acres; approximately 25% were on private lands. Fuels consisted primarily of ponderosa pine and oak brush. In 2002, the Cuerno Verde fire consumed approximately 400 acres,

Population (2000 census):	3,503
% Growth from 1990:	81.9%
County Size (square miles):	737
County Seat:	Westcliffe

including two homes. It cost approximately $500,000 to fight the fire. The county participates in the Emergency Fire Fund. Spread Eagle and Custer County have Community Wildfire Mitigation Plans in progress.

Drought-The risk of drought is homogeneous across the Upper Arkansas Area. The County has experienced drought for the last four years. 2002 was the driest year on record for the region and much of the State. The 2002 drought had a severe economic impact on the area.

Winterstorm-The relative isolation and mountainous topography of Custer County presents problems during severe winter storms. There are only three roads in and out of the county and their closure could isolate the county from emergency response support, as well as shipments of needed supplies. The county was included in a 2006 Presidential snow emergency declaration.

Hail-Forty-nine hail events were reported for Custer County between 1956 and 2006. In 1992, one person sustained injuries attributed to the storm.

Tornado-Six tornados have been reported in Custer County from 1954 to 1997. A tornado in 1960 was an F2. Minor damages were associated with two of the events.

History

1999	Presidential Disaster	Flooding, Mudslides, Landslides
2002	Presidential Disaster	Wildfires
2003	Presidential Emergency	Snow
2006	USDA Disaster	Drought, Fire, Heat, High Winds
2006	Presidential Emergency	Snow

Potential/Current Mitigation Projects

Critical facility protection (floodproofing), including the medical clinic; improve the defensibility of residential and commercial properties against wildfire; reduce the fuel load at strategic locations in WUI; reduce the vulnerability of municipal water supplies through public education; establish a storm water management plan; improve early notification capabilities for winter storm events; reduce the vulnerability of community assets to flash floods by improving the administration of FEMA flood-hazard areas; update the local hazard mitigation plan; community wildfire protection plans; projects as defined in the plans

Delta County

Population (2000 census):	27,834
% Growth from 1990:	32.7%
County Size (square miles):	1,157
County Seat:	Delta

Delta County is located in the western region of the State. In a risk assessment survey conducted by the Colorado Division of Emergency Management in 2003/2004 and updated in 2007, the county emergency manager identified exposure to winterstorms, windstorms, flash flooding, wildland fire, extreme heat and hail as the county's most probable exposure to hazard. Based on probability and severity, extreme heat, flash flooding and wildland fire were the top three. Delta entered the **Project Impact Program** in 2000. Delta has also received a **Storm Ready** designation from the National Weather Service. The county is currently developinging an FMA/PDM plan. The county has EPN and NOAA weather radios in place. The county does have an evacuation plan. Public education includes public presentations to schools, business groups, social organizations, Paonia High School, and governmental meetings. Capabilities have increased in the last three years with GIS equipment and one additional staff.

Winterstorms-Heavy snows can bring a community to a standstill by inhibiting transportation, knocking down utility lines and by causing structural collapse. Repair and snow removal costs can be significant.

Windstorms-Delta County is subject to significant, but non-tornadic winds, eight between 1993 and 2002. Although these winds may not be life threatening, they can disrupt daily activities, cause damage to buildings and structures, and increase the potential of other hazards such as wildfire.

Wildland/Grassland Fire-The number of homes being built in the urban/rural interface is increasing dramatically. The Colorado State Forest Service reports in 1990 there were seven subdivisions totaling 108 acres in the urban/wildland interface. The Wake Fire (1994) near Paonia burned over 3,900 acres and destroyed three homes. Suppression costs were $1,200,000 property damage amounted to $821,000. Wildfires in 1997 and 1999 also caused significant damage. The costs of the 1997 fire was $500,000. The costs of the Brimstone/Garcia fire $79,000 and burned 40 acres. In the past three years, a BLM FireWise grant was awarded. The county participates in the **Emergency Fire Fund**. Delta Hotchkiss Fire Department has a Community Wildfire Protection Plan in progress. There is a Community Fire Plan in Cedaredge Fire District.

Extreme Heat-Heat wave is often associated with drought. A heat wave associated with a drought is a very dangerous situation. Delta County has experienced drought for multiple years. 2002 was the driest year on record for the region and much of the State.

Flood-Between 1998 and 2003, five flood events causing approximately $1.4 million dollars in property damage and over $200,000 in crop damage have been recorded. In 2002 a flash flood closed Hwy 50, bridges and utilities washed out, three cars were carried in floodwaters, and at least one home flooded. 1993 was a flood season of flooding and stream bank erosion, particularly in Paonia along the North Fork of the Gunnison. Delta County was part of the ten county Presidential Disaster declaration for the 1984 flood. Public Assistance received for infrastructure repair was $657,850; the City of Delta suffered about $345,000 in damage; The Town of Paonia had $67,000; and Delta County had $292,000. Sommerset and Paonia are at high risk for flooding from the North Fork of the Gunnison River. Floodplain studies for Minnesota Creek (Paonia) and Surface Creek floodplain study (Cedaredge) have been completed recently.

The following communities participate in the **National Flood Insurance Program**: Delta County (unincorporated areas), City of Delta, Town of Cedaredge, Town of Hotchkiss, Orchard City, and the Town of Paonie. According to the October 1, 2003 **Community Rating System List of Eligible Communities** the City of Delta has a community rating of seven in the program.

There are 17 Class I and 14 Class II dams located in the county and nearly 200 reservoirs are located on Grand Mesa. Many date prior to 1900. There are two recorded failures listed in the hazard assessment: Fruitgrowers Dam on June 1937 and Carl Smitt Dam in May 1998. The community of Austin within the Town of Orchard City flooded when the Fruitgrowers Dam failed. A new structure was built by BoR in 1938-9. Carl Smith dam failure on May 2, 1998 caused flooded homes, 47 lost sheep, and three private bridges to wash out. Costs were estimated at $350,000. All Class I dams have emergency preparedness plans in place.

In 2004, the City of Delta successfully applied for and received a Hazard Mitigation Grant for a dredging and cribbing replacement project that will protect the City's wastewater plant from physical damage and prevent contamination during periods of flooding.

Landslide-The North Fork of Gunnison River landslide area has been designated as a high priority area by the USGS. The corridor has a history of serious and frequent landslide problems along its entire length. The areas include the Towns of Hotchkiss, Paonia and Somerset and several coal mines and their facilities. Hwy 133 and the Union Pacific Railroad serve the area and are at risk. The aggregate annual cost of direct landslide losses and excess maintenance in this hazard corridor is estimated to be at least $1 million dollars.

History

1984	Presidential Disaster	Flooding
1993	State	Flooding
1994	Fire Suppression	Wildfire
1995	State	Flooding
1998	Local	Dam Failure
2000	USDA Disaster	Drought
2002	Presidential Disaster	Wildfires
2005	USDA Disaster	Freezing Temperatures
2006	USDA Disaster	Heat, High Winds, Insect Pests, Late Freeze, Ongoing Drought
2007	USDA Disaster	Freeze

Potential/Current Mitigation Projects

Flood mitigation plans; local hazard mitigation plan, community wildfire protection plans; continue stream reach mapping as prioritized in the risk assessment-Surface Creek, Minnesota Creek, Kiser Creek, North Fork of the Gunnison, Ward Creek, Cottonwood Creek near Hotchkiss, Young's Creek, Cottonwood Creek (tributary in Tongue Creek), Dry Creek, Uncompahgre River; Upper Surface Creek floodplain study

Denver County ✓

Population (2000 census):	554,636
% Growth from 1990:	18.6%
County Size (square miles):	155
County Seat:	Denver

Denver is located in the central and eastern portion of the State and lies in the great plains with elevations between 4,500 and 6,500 feet. Denver County participated in the development of and is included in the **Denver Regional Natural Hazard Mitigation Plan**. Through the hazard identification and risk assessment process, using probability and potential impacts for hazards posing the greatest possible risk, the county identified drought, flood, and thunderstorms with their associated risks, as the hazards that pose the greatest possible risk.

Drought-2002 was the driest year on record for Denver.

Flooding-Fifteen flood events have been recorded between 1993 and 2005. In 2007, one death, a child, occurred when a baby carriage was swept in along the South Platte.

Through the hazard identification and risk assessment process 3,600 households and 1,200 businesses were identified as having a high risk of flooding.

There are seven Class I and three Class II dams in Denver. All Class I dams have emergency action plans in place.

Denver participates in the **National Flood Insurance Program.** According to the 2003 **Community Rating System Eligible Communities List,** Denver has a rating of nine. The city/county is served by the Urban Drainage and Flood Control District. Denver is currently using PDM funds to create a detention pond near a police substation.

Tornado-In the Colorado Front Range corridor tornados have been reported nine months of the year. Twenty tornado touchdowns were recorded in the city from 1950 to 2003. Twelve losses from 1966 to 1996 accrued over $32 million in damages and caused 13 injuries.

Hail-Denver has an expensive history of losses from hailstorms. A severe hailstorm in 1990 resulted in over $625 million in damages. One hundred fifty-four hail events between 1955 and 2006 have been recorded in the Denver area.

Winterstorm-Winterstorms can paralyze the area. The disruption of the urban system caused by heavy snow can have economic consequences as well. The blizzard in March 2003 caused major disruptions and economic losses. Denver was included in the 2006 Presidential snow emergency declaration for the storm of December 18th through the 22nd.

Wildfire/Grassland Fire-Denver Water Board participates in the **Emergency Fire Fund.** The following is taken directly from the Denver Water website, "Colorado's largest-ever forest fire, the Hayman fire of 2002, seared through major portions of Denver Water's watershed, charring the land and scorching the forest surrounding one of Denver Water's most valuable and vulnerable assets: Cheesman Reservoir.

The blaze started June 8, 2002, near Tarryall Creek, about 11 miles southwest of Cheesman. Driven by fierce winds, the fire reached Cheesman the next day, incinerating nearly all 7,200 forested acres of Denver Water land surrounding the reservoir. In twenty days, the fire ultimately burned 138,000 acres, destroyed 132 homes, devastated a treasured national forest, and put the workhorse of Denver's water system at risk. Over the following year, Denver Water crews worked tirelessly to prepare the forest in the short term for what Mother Nature must accomplish in the longer term: the recovery of an ecosystem. "The Colorado State Forest Service has estimated that it will take 150 years for the forest itself to be re-established," said Beth Roman, an analyst in Denver Water's Source of Supply section, in 2003. "However, vegetation and groundcover can come in relatively quickly and that's where we are now concentrating our efforts." "Since vegetation at Cheesman was completely wiped out, erosion occurs at a much faster rate than normal," Roman said. The soil surrounding Cheesman for the most part consists of crushed or granulated granite. Additionally, the heat of the fire created hydrophobic soil conditions that resist water absorption. These three factors made the area a perfect candidate for flash-flooding and serious erosion during heavy rainfalls. Erosion is a water system's biggest problem when a previously forested area has become completely devoid of vegetation, Roman explained. "Not only does erosion change the landscape and disturb growth of vegetation, but it also causes massive loads of sediments to move into the water supply. Sediments can clog the outlet works of the dam, reduce the storage capacity of the reservoir, and foul the water. Cheesman is Denver's main operating reservoir, thus making restoration of the area a certain priority for Denver Water." In the year immediately after the fire, the following restorative efforts took place at the Cheesman Reservoir property: ... The cost of the first year of Cheesman reclamation totaled more than $5 million, with the U.S. Natural Resources Conservation Service and the Environmental Protection Agency reimbursing Denver Water approximately $2.8 million of that amount. Between 2003 and 2005, Denver Water has spent about another $3 million on the Cheesman rehab. The cost of rehabilitating the entire 138,000 acres, of which the Cheesman property is only a small percentage, will exceed $100 million, as estimated by the Coalition for the Upper South Platte (http://www.uppersouthplatte.net). Since August 2005, the cost has been nearly $40 million."

History

1967	Local	Earthquake
1968	Local	Severe Weather
1998	Local	Severe Weather
2002	USDA Disaster	Drought
2003	Presidential Emergency	Snow
2006	USDA Disaster	Drought, Fire, Heat, High Winds

Potential/Current Mitigation Projects

Adoption/revision of building codes and development regulations; develop inventories of at-risk structures to prioritize mitigation projects; channel modifications; GIS mapping updates; update local hazard mitigation plan and flood plan; projects as identified in the plans; flood mitigation: SPR Denver County Reach (Zuni-Sun Valley), 36th Street Storm Outfall (Downing) design, 40th Ave & High Street Storm System Outfall, East Hampden Ave Outfall (Girard), East Cornell Ave Outfall (Eastman), 20th Street Improvements, 40th Avenue & High Street Storm System Outfall, 36th Street Storm Outfall (Downing), 38th Avenue Storm System, Bear Creek at Mullen HS, INCA Outfall

Dolores County √

Population (2000 census):	1,844
% Growth from 1990:	22.6%
County Size (square miles):	1,028
County Seat:	Dove Creek

Dolores County is located in the southwest part of the State on the Utah border in the transition area from high desert mesas to the high mountains of the Rockies. Dolores County participated in the development of and is included in the **Dolores County Pre-Disaster Mitigation Plan.** Through the hazard identification and risk assessment process, using probability and potential impacts for hazards posing the greatest possible risk, the county identified windstorms, floods, winterstorms, drought, wildfire, land subsidence, landslides and avalanche as the hazards that pose the greatest possible risk. The worst hazard events experienced in Dolores County were flooding from heavy rains and snowmelt. The Dolores County emergency manager has confirmed that there are no changes to the risk assessment at this time.

Windstorm-Dolores County has experienced high windstorms not associated with tornadic events. The County has experienced two high wind events in the last five years.

Flood-Flooding is the highest priority natural hazard in Dolores County, largely due to the physical geography which includes the Dolores River and creeks as well as varied topography. The Dolores River, a designated high risk in the area of Rico, has a history of flooding. There is one Class I dam and two Class II dams located in the County. The Class I dam has an emergency action preparedness plan.

The following communities participate in the **National Flood Insurance Program**: Dolores County (unincorporated areas), City of Dove Creek, and the Town of Rico.

Winterstorm-Severe winter storms are more common in the eastern end of the County due to the high elevation, which significantly increases snowfall and colder temperatures reduce snow melt.

Drought-Dolores County has, like much of the rest of the State, experienced drought for multiple years and was in an extreme drought at the beginning of this decade. Because much of the county is dominated by agriculture, a severe economic impact could occur as the result of continued drought.

Wildland/Grassland Fire-The Colorado State Forest Service reports in 1999 there were eight subdivisions, comprising 800 acres, in the urban/wildland interface. Areas of the county that are especially susceptible to wild fire are the south flanks of the mountains that are exposed to intense sun and daily warm rising thermal winds. The county participates in the **Emergency Fire Fund**. Dolores County has a **Community Wildfire Protection Plan**.

Seven wildfire high risk areas are identified in the Community Wildfire Plan: Ground Hog Vista, Glade Ranch Subdivision, Redstone, West Fork, Rico, Cross Canyon, and Dolores Rim.

Landslide-According to USGS data, the northeastern corner of Dolores County, including the Rico area, is considered a high landslide risk with slopes in the 30% to 90% range. The county areas along the upper Dolores River and Rico to Dunton Road, fall in the medium landslide risk category. Dunton Road to Rico is of special concern due to soil type and steep grades.

Subsidence-In Dolores County the presence of abandoned mine shafts and ground water sources increases the possibility of land subsidence. Areas that are potentially susceptible are located under the entire town of Rico and surrounding area.

Avalanche-Six avalanche deaths occured in the county in 2003 due to avalanche. Avalanche areas have been identified as a part of Rico's zoning ordinance. These avalanche areas do not currently put the town at risk, but are a hazard to recreational activities. Approximately 25 properties, homes, and businesses lie in the identified avalanche chute and out run areas.

History

1984	Presidential Disaster	Flooding
2002	USDA Disaster	Drought
2002	Presidential Disaster	Wildfires
2006	USDA Disaster	Drought, Fire, Heat, High Winds
2006	USDA Disaster	Freezes

Potential/Current Mitigation Projects

Develop inventories of at-risk buildings, infrastructure and properties and prioritize mitigation projects accordingly; develop, enhance and implement education programs targeted to mitigating natural hazards; update/revise floodplain maps; construct a storm drain system to protect Dove Creek water mains; conduct studies to develop flood plain maps for Silver Creek and other flood prone areas in Rico; revise floodplain development regulations; acquisition of floodplain properties; redesign and rebuild Rico storm drain system; forest thinning; map existing mine shafts under the Town of Rico; update local hazard mitigation plan; develop/update community wildfire protection and flood mitigation plans; projects as identified in the mitigation plans

Douglas County √

Douglas County, located south of Denver, is the fastest growing county in the state. Douglas County participated in the development of and is included in the **Denver Regional Natural Hazard Mitigation Plan**. Through the risk assessment process, the county identified drought, flood, thunderstorms (hail/tornado), winterstorms, landslides and wildland fire as the hazards that pose the greatest possible risk. The Douglas County zoning ordinance requires vegetation management and fuel reduction efforts in areas within the county's Wildland Hazard Overlay District.

Castlewood Canyon State Park Colorado State Parks website

Drought-Some communities and many individuals in Douglas County rely on wells. Drought can result in everything from crop failure to lack of water for fire fighting. The county has experienced drought for the last four years. 2002 was the driest year on record.

Flood-Thirteen flood events have been recorded in Douglas County between 1993 and 2003. It is estimated that approximately 2,600 households and 200 businesses are at high risk of flood hazard. The following communities participate in the **National Flood Insurance Program:** Douglas County (unincorporated areas), and the Towns of Castle Rock, Larkspur and Parker. According to the October 1, **2003 Community Rating System List of Eligible Communities,** Douglas County has a community rating of nine. The Town of Parker has a rating of seven. There are two Class I dams and six Class II dams located in the county. The northern part of the county is in the Urban Drainage and Flood Control District.

Thunderstorms-In Douglas County, a number of funnel clouds are sighted each year. Several have touched down, but have caused little damage. From 1950 to 1998, 49 tornados have been reported. increase. Between 1961 and 2001, 135 hail events were recorded.

Winterstorms-Between 1993 and 2004, 59 heavy snow events have occured in the County. Power failures and drifting snow can isolate many people. Travelers on I-25 may become snowbound and require search and rescue efforts. Repair, snow removal and rescue costs can be significant.

Population (2000 census):	175,766
% Growth from 1990:	191.0%
County Size (square miles):	843
County Seat:	Castle Rock

Landslides-Certaian steep sided mesas of the County, starting south of Castle Rock and extending to the El Paso county line, are subject to extremely hazardous debris avalanches and debris flow. Occurrences are sporadic and unpredictable, bu are potentially very dangerous. Areas that have experienced major wildland fires denuding the slopes of vegetation are particularly vulnerable.

Wildland/Grassland Fire-According to the Colorado State Forest Service, in 1999 there were 232 subdivisions, totaling 109,000 acres, in the urban/wildland interface area. Through the risk assessment process, the county identified 25,600 households and 2,100 businesses who are at a high to very-high risk of wildfire. Douglas County has instituted mitigation measures for wildfire. These include promoting the FireWise public information campaign, adopting Wildfire Hazard Area Overlay Zoning Districts, requiring defensible space, timber fuel reduction, fire resistant building materials, water supplies and improved access in new and existing residential developments. The county participates in the **Emergency Fire Fund.** Perry Park is recognized as a **FireWise Community** and has a **Community Wildfire Protection Plan.** They are updating their CWPP in 2007. Roxborough Park and South Platte also have **Community Wildfire Protection Plans.** Pine Ridge Subdivision has a Community Wildfire Protection Plan in progress. The county is a member of the Coalition for the Upper South Platte. Three areas identified outside Roxborough Park boundaries that pose potential threat are: South Platte watershed, Roxborough State Park, and Pike National Forest. Treatments anc costs for fifty-six areas are identified in the Roxborough plan.

History

1999	Presidential Disaster	Flooding, Mudslides, Landslides
2002	Presidential Disaster	Wildfires
2002	USDA Disaster	Drought
2003	Presidential Emergency	Snow
2006	USDA Disaster	Drought, Fire, Heat, High Winds

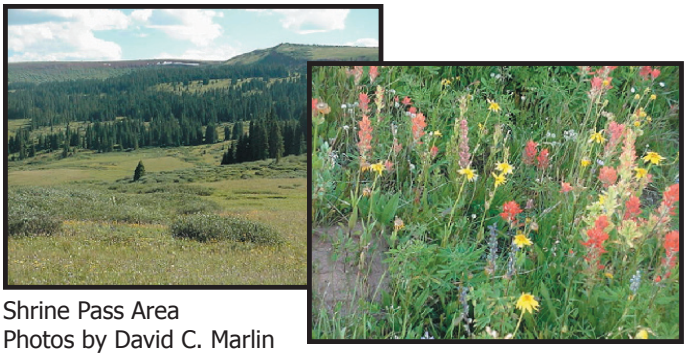
Potential/Current Mitigation Projects

GIS updates; update local hazard mitigation plan; community wildfire protection plans; flood mitigation plans; projects as identified in the plans; continued wildland fuel management; flood warning systems; public education; Roxborough Park-fuelbreak gaps along roads, defensible space, slash/yard waste disposal site;

Eagle County √

Population (2000 census):	41,659
% Growth from 1990:	90.0%
County Size (square miles):	1,685
County Seat:	Eagle

Eagle County is located in the western region of the State and its topography is primarily mountainous. Eagle County and it's jurisdictions participated in the development of the **Multi-jurisdictional All-Hazards Pre-Disaster Mitigation Plan for Pitkin and Eagle Counties**. The county is in the process of doing area specific evacuation plans. The county provides education on topics like flooding, wildfire, and general preparedness. Eagle County has an informative website with wildfire mitigation videos, zoomable maps and documents.



Shrine Pass Area
Photos by David C. Marlin

Landslide-Landslides are a significant problem in Eagle County. The Vail area has over 20 locations designated as high hazard earthflow areas. In 1984, six major earthflows occurred affecting the town and private property. Another area of concern is the Dowds Junction landslide at the intersection of I-70 and U.S. Highways 6 and 24. Landslides threaten the highways and could dam the Eagle River causing flooding and blocking the Denver and Rio Grande Railroad. During the late 1970s and early 1980s, several slides caused road blockages on I-70 and U.S. 6. Meadow Mountain Slide, between Minturn and Dowds Junction, has been moving for at least 35 years and caused considerable damage to Highway 6 in 1984. That same year, a slide covered the D&RG Railroad tracks near Minturn. Historical slide areas threaten the Town of Red Cliff.

In 1984, a flow damaged several homes and required the removal of three feet of mud and debris from County Road P-293. Additional areas threatened by landslides are Shrine Pass, Basalt, Sweetwater, and Beaver Creek. Some grants have been received for landslide studies in the past three years.

Wildfire/Grassland Fire-The Colorado State Forest Service reports in 1999 there were 205 subdivisions totaling 14,500 acres in the urban/wildland interface. Approximately 80% of the county is national forest and BLM land. Eagle County adopted wilfire regulations in 2003. Section 4-430 of the Eagle County Land Land Use Regulations addresses development in areas subject to wildfire hazards. The county has a wildfire mitigation specialist. Cordillera and Eagle County have **Community Wildfire Protection Plans.** The Eagle County plan identifies the following as potential areas of elevated risk: Missouri Heights area near El Jebel, Red Hill and Cotton Ranch upper bench near Gypsum, Abrams and Hernage Creek areas of EAgle Ranch, by Creek Mesa Subdivision, Upper Kaibab area near Eagle, Bellyache Ridge area, Cordillera, Horse Mountain Ranch, Copper Spur Road area near Bond, Lake Creek Area near Edwards, Wildridge and Mountain Star Area near Avon, Intermountain Area near Vail, Scattered intermix on Tennessee Pass, Fulford, Minturn, Red Cliff, Homestake, Holy Cross City, Sweetwater, Salt Creek area near Eagle, Gore Creek, Brush Creek, Gypsum Creek, and Hernage Creek above Brush Creek. Wildfire fuel reduction projects are tied to open space areas with county money leveraged with grant dollars in conjunction with homeowners providing in-kind match of defensible space management on their own property adjacent to the open space. Wildfire mitigation projects have been completed in the past three years. An example: the Eby Creek subdivision near Eagle completed a wildfire fuel reduction project which included a shaded fuel break created by the BLM adjacent to the subdivision along with tree thinning and prescribe fire conducted by county agencies on Eby Creek open space property within the subdivision and defensible space management for 18 private properties within the subdivision. The county participates in the **Emergency Fire Fund**.

Flood-Brush Creek and Eagle River are listed as high-risk drainages threatening the Town of Eagle. Eagle River also threatens Red Cliff and Minturn. Gore Creek, another high-risk drainage, flows through the Vail Valley. Eagle County was included in the presidential disaster declaration for the 1984 flooding. Throughout the season, many structures in Red Cliff were partially flooded even though the town sandbagged extensively. Flooding damaged sanitation facilities and took out several bridges. In Vail, flooding and landslides damaged buildings and roads forcing evacuations. The following participate in the **National Flood Insurance Program:** Eagle County (unincorporated areas), Avon, Basalt, Gypsum, Redcliff, and Vail. There are six Class I and four Class II dams.

Earthquake-Several earthquakes of small magnitudes were recorded including one in Gilman (1957). The county is located over several faults; if movement occurred, damage could result.

Winterstorm-Eagle County is vulnerable to winter storms. Excessive snow can result in power outages and blocked roadways.

History

2006	USDA Disaster	Heat, high winds, ongoing drought

Potential/Current Mitigation Projects

Promote adoption of wildfire regulations; encourage the adoption of "Firewise" standards for all subdivisions; provide back up electrical power supply for critical infrastructures; plan for areas to provide snow removal without compromising road widths; establish "Storm Ready" programs; expand NOAA weather radio coverage to include the entire county; add real time localized avalanche hazard information to the website; update mapping of avalanche prone areas and incorporate into GIS for public access; implement response plans to provide for quick remediation of slide damage; update mapping of rock/landslide areas; review high and medium risk landslide hazard areas and evaluate and prioritize for physical mitigation actions; implement early warning alert systems on Gore, Brush and Gypsum Creeks and the Colorado, Eagle, Roaring Fork and Frying Pan Rivers; expand NOAA weather radio coverage to include the entire county; establish "Storm Ready" programs throughout the county

Elbert County √

Elbert County is located in the north and central region of the State and is rural in nature, however the population of the County has increased dramatically over the last decade. Elbert County participated in the development of and is included in the **Northeast Emergency Management Association Hazard Mitigation Plan.** Through the hazard identification and risk assessment process, using probability and potential impacts for hazards posing the greatest possible risk, the county identified flood, winterstorms and drought as the hazards that pose the greatest possible risk.

Flood-Between 1997 and 2003, six flood events were recorded in Elbert County. There are two major areas of concern regarding flooding: Running Creek in Elizabeth and Kiowa Creek in Kiowa. In 1935, a major flood on Kiowa Creek substantially damaged the Town of Kiowa and its bridges. In August 1997 and May 1999, the County was affected by widespread rainstorms and flooding. In both years the County was included in presidential disaster declarations due to damage to public infrastructure. The Town of Kiowa and Elbert County participate in the **National Flood Insurance Program.** Elbert County recently joined the program.

Winterstorm-Like most counties located on Colorado's eastern plains, residents of Elbert County are subject to severe winter storms. Between 1993 and 2004, eleven heavy snow events occured. Road closures, power outages, and livestock loss are all familiar to the County's residents.

Drought-The hazard identification research showed that Elbert County has experienced 4 years of drought. 2002 was the driest year on record for the region and much of the State. Because of its agricultural nature, Elbert County would suffer economic impact as a result of a severe and continued drought.

High Winds-Like most counties located on Colorado's eastern plains, Elbert County is subject to high, but non-tornadic winds. Although these winds may not be life threatening, they can disrupt daily activities, cause damage to buildings and structures, and increase the potential of other hazards such as grass fires.

Wildland/Grassland Fire-There are heavily wooded and large grass areas in the county. Both have the potential for wildfire, especially during a dry season. Colorado State Forest Service figures show in 1999 there were 52 subdivisions, totaling 29,445 acres, in the urban/wildland interface.

History

1965 Presidential Disaster	Flooding
1967 Presidential Disaster	Flooding
1997 Presidential Disaster	Flooding
1999 Presidential Disaster	Flooding, Mudslides, Landslides
2002 USDA Disaster	Drought
2002 Presidential Disaster	Wildfires
2003 Presidential Emergency	Snow
2006 USDA Disaster	Drought, Fire, Heat, High Winds

Population (2000 census):	19,872
% Growth from 1990:	106.0%
County Size (square miles):	1,865
County Seat:	Kiowa

Potential/Current Mitigation Projects
Become Storm Ready certified; become a FireWise community; floodproof schools in the floodplain in Kiowa; apply to CWCB and FEMA for revised flood plain maps; tornado and severe weather shelters

El Paso County

Population (2000 census):	516,929
% Growth from 1990:	30.2%
County Size (square miles):	2,158
County Seat:	Colorado Springs

El Paso County is located in the central region. It has varied terrain including plains and mountains. Most residents live in the Colorado Springs area. El Paso County is finalizing a mitigation plan. Colorado Springs has the **Pre-Disaster Mitigation (PDM) Plan for Colorado Springs, Colorado.** In a risk assessment survey conducted in 2007, the county emergency manager identified winterstorms/ blizzards, wildland urban interface fire, and flood as the county's highest exposure to hazard. El Paso County was a **Project Impact Program** community. The county has an EAS system activated directly by the NWS Office in Pueblo to their primary radio/TV station for natural hazards; they can input direct messages to the primary station for dissemination. Four of the small municipalities have warning sirens. County OEM have pushed to have schools and industry obtain and use weather radios, and encourage homeowners in the eastern part of the county to use weather radio for early warning, primarily for tornados. The flood warning system provides both major OEMs and the NWS readings from over 60 sensors in 40 locations (precipitation, rate of accumulation); for 7 locations (wind speed, direction, temperature, humidity), and for 2 locations (fuel moisture). There is an evacuation plan. Public information includes news releases, regular speaking engagements, media interviews, appearances at community events such as 'Night Out', 'State of the City,' wildfire fairs, Fire District open houses, etc, and a hazards/safety calendar is distributed annually. In the past three years, GIS has improved in capability and timeliness of data.

Winterstorms-Annual snowfall ranges from 120 inches in the mountainous northwest portion of the county to less than 40 inches in the southeast. Snowstorms, accompanied by high winds and freezing temperatures, cause roadway closures several times a year. This isolates many people until the roads are reopened.Four severe winter storms and a blizzard all occurred in the period from October 2006 through April 2007. El Paso County was included in one of the 2006 Presidential snow emergency declarations. In April 2001 spring snowstorms caused power outages in the eastern part of the county. Damages were estimated at approximately half a million dollars. In October 1997 the county experienced a blizzard resulting in four deaths and stranded motorists. A 1987 snowstorm closed the airport, businesses and schools, downed power lines, and killed livestock. It is estimated this storm cost the City of Colorado Springs over $575,000.

Wildland/Grassland Fire-Wildfires occur yearly and potential increases with drought conditions. Types of fires range from timber fires in the west to grass fires in the east. The Colorado State Forest Service reports in 1999 there were 87 subdivisions totaling 42,076 acres in the urban/wildland interface. The county participates in the **Emergency Fire Fund.** In 2003, El Paso County successfully applied for and received an HMGP grant for a chipper for a wildfire fuel reduction project in the Woodmoor-Monument area. Carroll Lakes, Crystal Park HOA, and Woodmoor have **Community Wildfire Protection Plans**. High priority areas include: Crystal Park, Woodmoor**,** El Paso County, Black Forest Fire Protection District, Ute Pass (Cascade, Chipeta Park, and Green Mountain Falls), and Ridgewood HOA have Community Wildfire Protection Plans in progress. There is a very active and successful slash/mulch site in the Black Forest area that has operated for about 10 years. The volunteer Wildland Fire Team does patrols on high-fire danger weekends, and have done two defensible-space demo sites in county parks. Most fire districts offer defensible space advice to homeowners who request evaluations. There is a chipper that is made available to fire districts that want to conduct a slash/mulch clean up day, or collect slash in conjunction with a general clean up day. Prescribed fires are conducted regularly at Fort Carson, the Air Force Academy, in the Pike and San Isbel Forest, and on State Forest lands. Woodmoor has received **FireWise** recognition.

Flood-There are 19 drainage basins, all are subject to flooding. Flooding is an annual problem in Colorado Springs and Manitou Springs. Fountain Creek is located in an area susceptible to heavy thunderstorms and is often subject to flash flooding. A warning system is in place on both Fountain and Monument Creeks to provide advance warning of flash floods. In early 2007, final repair and improvement on Old Pueblo Highway south of Fountain was completed. Also, the three-county Fountain Creek Watershed Plan has been completed and several sub-committees are working on projects to improve water flow and retention, reduce sediment depositing, and regulate major stream flows. The Fountain Creek Watershed Plan Technical Committee has been working on drainage plans and made significant progress in the past 8 to 10 years. The county planning department enforces strict standards for retention ponds and drainage improvements for the new developments, most especially those near a major stream or tributary. There are 11 Class I and 17 Class II dams.

Tornado-Several have touched down in populated areas including Manitou Springs (1979) and Green Mountain Falls (1985). Sixty-five tornados were reported from 1950 to 1998. In May 2001, severe thunderstorms struck the Front Range and eastern plains. A tornado hit the town of Ellicott, damaging mobile homes and a school. Nineteen people were injured. Damages were estimated at over $6 million. The Ellicott School District successfully applied for and received a hazard mitigation grant and have completed construction of a community tornado shelter.

Landslide-Numerous landslides occured in Colorado Springs during the spring of 1995 following a winter of very heavy snowfall. In 1999, the county experienced heavy rains, flooding, and landslides and was included in a presidential disaster declaration. Colorado Springs and Manitou Springs successfully applied for mitigation funds to acquire and demolish private homes destroyed by landslides. Three homes were acquired in Manitou Springs and 28 in Colorado Springs; the properties are now open spaces. The Manitou Springs rockfall area is becoming more severe with construction of new homes and facilities in the steep tributary valleys and other sideslope areas.

Earthquake-In 2001, the county experienced a magnitude 3.1 earthquake, the epicenter was located 20 miles northwest of Colorado Springs.

History

1989	Local	Wildfire
1990	State	Tornado
1993	Local	Flooding
1995	Local	Wildfire
1995	State	Flooding, Landslides
1997	State	Snow Emergency
1999	Presidential Disaster	Flooding
2001	Presidential Disaster	Severe Weather
2002	USDA Disaster	Drought
2002	Presidential Disaster	Wildfires
2003	Presidential Emergency	Snow
2005	USDA Disaster	Drought, Wind, Hail, Heavy Rain
2006	USDA Disaster	Heat, High Winds, Insect Pests, Late Freeze, Ongoing Drought
2006	Presidential Emergency	Snow
2007	SBA Administrative	Fire

Potential/Current Mitigation Projects

Form a full-time Wildfire Mitigation Team; expand the fire districts' efforts to identify susceptible properties; teach property owners to create defensible space; wildfire mitigation projects including defensible space; improve snow-clearing and rescue command and control procedures during major snowstorms and blizzards.

Fremont County √

Fremont County is located in the central area of the State. Fremont County participated in the development of and is included in the **Upper Arkansas Area Council of Governments Pre-Disaster Mitigation Plan.** Through the assessment process, the county identified wildland fire, flood, and drought as the hazards that pose the greatest risk.

Wildland/Grassland Fire-Colorado State Forest Service figures show in 1990 there were 57 subdivisions, totaling 38,000 acres, in the urban/wildland interface. In 2002, the Iron Mountain fire burned approximately 4,436 acres of private and Bureau of Land Management (BLM) land. Around 200 structures, of which 100 were homes, were consumed by the fire. Suppression costs exceeded $1.5 million dollars.

The City of Canon City has completed about 3 miles of fuel breaks along the north and south access roads leading to the Royal Gorge Park and Bridge.

The county participates in the **Emergency Fire Fund.** Fremont County has a Community Wildfire Protection Plan in progress.

Flood-Fifteen floods between 1994 and 2001 occurred in the county. The Arkansas River, near Florence, Cañon City, and Parkdale, has overflowed many times and is listed as a high-risk flood area. Cañon City has severe problems nearly every year caused by high water tables, spring snowmelt, rainstorms and an inadequate storm drainage system. Grape Creek drainage in the Cañon City area is also listed as a high-risk flood area; floods occurred in 1991 and 1994. In 1994, damage was in excess of $400,000. Although there were no deaths or injuries, property damage has been extensive in areas of northeast Cañon City. A 1996 flash flood caused $800,000 in damage and a 1999 flood resulted in over $4 million dollars in damage and a presidential disaster declaration. The county received Public Assistance funding to assist with recovery efforts. Cañon City successfully applied for hazard mitigation funds and has built detention ponds. To reduce recovery costs associated with flooding, Cañon City has enacted many mitigation measures. These measures include identification of flood prone areas, appropriate flood control structures, and development regulations. A flood mitigation work plan, which includes an emergency response plan and maintenance of existing drainage systems, has been prepared. Development in the flood plains happens only under the strictest of supervision. The following communities participate in the **National Flood Insurance Program**: Fremont County (unincorporated areas), Cañon City, Florence, and Rockvale.

History

1999	Presidential Disaster	Flooding, Mudslides, Landslides
2002	Presidential Disaster	Wildfires
2003	Presidential Emergency	Snow
2006	USDA Disaster	Drought, Fire, Heat, High Winds
2006	USDA Disaster	Flooding

Population (2000 census):	46,145
% Growth from 1990:	43.0%
County Size:	1,562
County Seat:	Cañon City

According to the October 1, 2003 **Community Rating System List of Eligible Communities**, Fremont County and the City of Canon City have a community rating of nine. There are four Class I and three Class II dams in the County; all Class I dams have emergencypreparedness plans in place.

Drought-The incidence and severity of the drought hazard is cyclic, but lends to be static over large periods of time. The vulnerability of Fremont County community assets to drought, is tending to increase through time as the demand for the limited raw water resources go up.

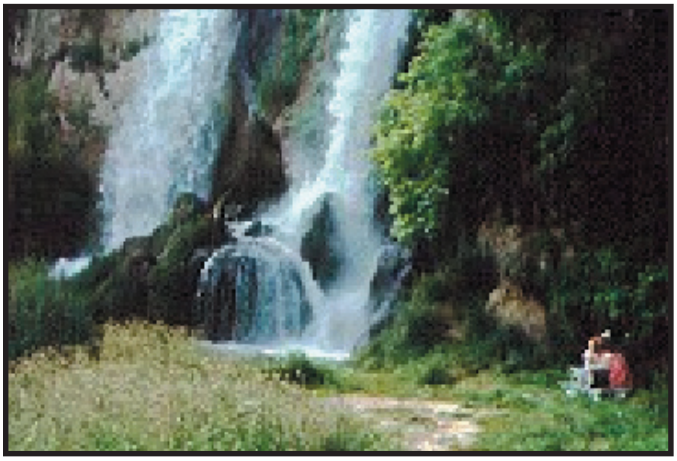
Winterstorm-Fremont County is threatened annually by severe winterstorms. Winterstorms isolate residents and communities due to road closures and utility outages.

Potential/Current Mitigation Projects

Improve the defensibility of residential and commercial properties against wildfire; reduce the fuel load at strategic locations in WUI; reduce the vulnerability of municipal water supplies through public education; establish a storm water management plan; improve early notification capabilities for winter storm events; reduce the vulnerability of community assets to flash floods by improving the administration of FEMA flood-hazard areas

Garfield County

Garfield County is located in the northwest region of the State. In a risk assessment survey conducted by the Colorado Division of Emergency Management in 2003/2004, county emergency management personnel identified exposure to flood, wildland fire and landslide as the county's most probable exposure to hazard.



Rifle Falls State Park
Photo on Colorado State Parks website

Flood-Twenty-one flood events have occured between 1993 and 2004, resulting in in over $1.6 million dollars in damage. The County's high-risk flood drainages are in the New Castle area along the Colorado River, Elk and Canyon Creeks, and in the Grand Valley along the Colorado River from Rulison to the county line. Roaring Fork River is listed as a high risk to Glenwood Springs along Highway 82 from the southeast to the point where it joins the Colorado River. Rifle Creek flooded Rifle several times during the past century including in 1992 during the spring runoff season when a stationary thunderstorm caused flash flooding that destroyed three residences and damaged several more. As a result, a greenbelt was developed in the floodplain. A flood on Parachute Creek would flood Parachute and residences out of town.

Rifle, Silt, unincorporated Garfield County, Carbondale, Glenwood Springs and Parachute participate in the **National Flood Insurance Program.** There are six Class I and seven Class II dams in the County.

Wildland/Grassland Fire-Colorado State Forest Service reports in 1990 there were 103 subdivisions, totaling 7,091 acres, in the interface. Wildfire danger has intensified in recent years as more people move into the urban/wildland interface. Fifteen wildland fires occured between 1998 and 2003 and caused over $6 million dollars in damages. Wildfires in 2002 consumed over 26,000 acres in Garfield County. The county participates in the **Emergency Fire Fund.** Glenwood Springs Fire Protection District has a **Community Wildfire Protection Plan**. Communities in the plan ranked as extreme or very high risk include Highlands, North No Name, Midland, Canyon Creek Estates, Mel Ray/Shady Acres, Chelyn Acres, Upper Canyon Creek, Upper Mitchell Creek, Oasis Creek, Sunlight View I, Black Diamond, Mountain Springs Ranch, East Glenwood, Three Mile, Oak Meadows, and Lower Canyon Creek. High risk areas include Sunlight, South No Name, and Elk Springs.

Population (2000 census):	43,791
% Growth From 1990:	46.1%
County Size (square miles):	2,994
County Seat:	Glenwood Springs

Landslide-Historically, Douglas Pass-Baxter Pass landslide and debris flow areas is one of the most active landslide areas of Colorado. During some years landslides are so active that the entire terrain can change within the period of a yeard and highways have been closed for months at a time. Affected facilities include Hwy 139, a Garfield County road and numerous energy related pipe lines. Landslides are a constant risk in Glenwood Springs as the central business district and several residential districts are built on a debris fan. In 1986, the County declared a financial disaster due to damage caused by landslides.

Earthquake-In 1982, 19 small earthquakes were recorded in the Carbondale area. In August 2001, a 4.0 earthquake was recorded 5 miles northwest of Glenwood Springs

History

1984	Presidential	Flooding
1994	Local	Fire
1993	State	Flooding
1998	Local	Landslide
2002	USDA Disaster	Drought
2002	Presidential Disaster	Wildfire
2006	USDA Disaster	Heat, high winds, ongoing drought

Potential/Current Mitigation Projects

Local hazard mitigation plan; community wildfire protection plans, flood mitigation plans; projects as identified in the plans; addressing, evacuation, and shelter-in-place; public education; home mitigation projects, including ignition resistant construction; fuels modification projects, including defensible space and firewise plantings; water supply projects; parcel level wildfire analysis;

Gilpin County

Gilpin County is located in the northcentral region of the State. Gilpin County hazard identification is included in the **Denver Regional Natural Hazard Mitigation Plan**. Through the assessment process, using probability and potential impacts for hazards posing the greatest possible risk, the county identified avalanche, drought, flood, winterstorms, thunderstorms with their associated risks, and wildland fire as the hazards that pose the greatest possible risk.

Avalanche-An avalanche is a mass of snow, ice, and debris flowing and sliding rapidly down a steep slope. Gilpin County has conditions that are conducive to avalanche and avalanches have occurred during the winter as the result of heavy snow accumulations on steep slopes.

Drought-Drought occurs when a long period passes without substantial rainfall. 2002 was the driest year on record for the region and much of the State.

Flood-The county has many areas at risk of flash flooding along its steep creeks and drainages, but only South Boulder Creek is listed as a high risk (affecting the areas of Rollinsville, Lincoln Hills, and Pinecliff). In 1998, heavy rain triggered a mudslide in Blackhawk. The mudslide blocked main street and caused an estimated $500,000 in damage to a local casino. The following communities participate in the **National Flood Insurance Program**: Gilpin County (unincorporated) and the Cities of Black Hawk and Central City.

There is only one Class I dam in the County and no Class II dams. The Class I dam has an emergency preparedness plan in place.

Winterstorm- Winterstorms can cause road closures and strand motorists (many on Highway 119). Heavy snows can bring a community to a standstill by inhibiting transportation, knocking down utility lines and by causing structural collapse. Repair, removal and rescue costs can be significant.

Wildland/Grassland Fire-With growing numbers of people moving into the urban/wildland interface, and the numbers of people recreating in the back country rising, the risk for human-caused fire will also rise. Colorado State Forest Service figures show in 1999 there were 9 subdivisions, totaling 7,680 acres, in the urban/wildland interface area. Through the hazard identification and risk assessment process approximately 1,500 households and 200 businesses have been identified as having a highrisk of exposure to wildfire. The county participates in the **Emergency Fire Fund.** Structural fires are a hazard in Central City and Black Hawk due to the many old buildings in the area. Colorado Sierra Fire Protection District has a **Community Wildfire Protection Plan**. No areas in the CSFPD were marked as extreme risk.

History

1995	State	Flood/Landslide
2002	Presidential Disaster	Wildfires
2002	USDA Disaster	Drought
2003	Presidential Emergency	Snow

Population (2000 census):	4,757
% Growth from 1990:	55.0%
County Size (square miles):	149
County Seat:	Central City

Mines-Abandoned and/or inactive mines are abundant in Gilpin County, especially in historical districts now turned into gaming districts of Black Hawk and Central City. While State and Federal agencies are currently working to close such mines (a costly and generally time consuming endeavor), the number of mines remaining open to date is staggering. The hazards abandoned mines create to both humans and livestock is quite significant, and should not be underestimated.

Potential/Current Mitigation Projects

Develop flood, local hazard, and community wildfire protection plans; implement projects as defined in the plans; home wildfire mitigation; wildfire mitigation on Fairburn Mountain; better evacuation routes; public education; shelter-in-place; addressing; defensible space

Grand County √

Population (2000 census):	12,442
% Growth from 1990:	56.2%
County Size (square miles):	1,840
County Seat:	Hot Sulphur Springs

Grand County is located in the northcentral region of the State. In a risk assessment survey conducted by the Colorado Division of Emergency Management in 2003/2004 and updated in 2007, the county emergency manager identified exposure to wildland fire, winterstorms, avalanche/rockslide as the county's highest exposure to hazard, based on probability and severity. Grand County has a local hazard mitigation plan in progress. A limited hazard warning system is in place but needs additional funding to alert the persons traveling throughout Grand County, persons without land-line phone service, as well as people outdoors. Grand County utilizes Emergency Phone Notification T ("reverse 911") to notify those with a land-line telephone service. On the internet, East Grand Fire District and Grand County have the ability to post emergency information. Both of these tools are very helpful, but fall short of notifying people who are traveling, do not have land-line telephones, or people outdoors. Grand County is working in collaboration with agencies and communitie to develop evaucation plans. Grand County OEM currently has a target date of June 1, 2008 for a comprehensive county evacuation plan appendix.

Kemp-Breeze State Wildlife Area Photo by Pete Walker, DNR

Wildland/Grassland Fire-The Colorado State Forest Service reports in 1999 there were 276 subdivisions, totaling 13,900 acres, in the urban/wildland interface. The county participates in the **Emergency Fire Fund.** Grand Lake Fire Protection District and Grand County **have Community Wildfire Protection Plans.** Fraser Valley (Fraser/Winter Park/Sunset Ridge) have a Community Wildfire Protection Plan in progress. Cooperation with the US Forest Service, Grand County Department of Natural Resources, Grand Lake Fire District have developed plans and instituted prescribed burns, slash & mulch burns to begin the process to reduce wildfire fuel sources. This work also includes partnerships with private industry and private organizations who are also removing wildfire fuels. Additional funding is necessary as the beetle killed trees continue to increase faster than the mitigation projects can be funded. Wildfire mitigation actions homeowners can take are discussed at community meetings.

Avalanche-An avalanche is a mass of snow, ice, and debris flowing and sliding rapidly down a steep slope. Grand County has conditions that are conducive to avalanche and avalanches have occurred during the winter as the result of heavy snow accumulations on steep slopes. An avalanche in 1995 killed two people, destroyed a home and caused extensive damage to property. In the winter of 2007 the county went into a state of emergency due to an avalanche on Berthoud Pass and ground blizzards shutting down Highway 40 in numerous locations across the county. Emergency shelters were set up in Granby and Fraser to assist stranded motorist. The ski areas were forced to close early due to the high winds. Intermittent disruption of electrical power occurred in rural subdivisions. The event concluded and was mitigated within twenty-four hours.

Winterstorms-Heavy snow, ice, severe winter storms and blizzards are common in Grand County. One hundred and eighty one heavvy snow events were recorded between 1993 and 2004. Heavy snows can bring a community to a standstill by inhibiting transportation, knocking down utility lines and by causing structural collapse. Repair and removal costs can be significant.

Flood-There are nine Class I and nine Class II dams located in the County. All of the Class I dams have emergency preparedness plans in place.

The following communities participate in the **National Flood Insurance Program**: Fraser, Winter Park, and Grand Lake.

History

2000	USDA Disaster	Drought
2002	Presidential Disaster	Wildfires
2003	Presidential Emergency	Snow

Potential/Current Mitigation Projects

Public education on natural hazards; mobile message boards to identify locations setup as shelters, and provide emergency information. Further funding is necessary to purchase mobile communications that allows for cellular telephone contact of emergencies and information.

Gunnison County √

Population (2000 census):	13,956
% Growth from 1990:	35.9%
County Size (square miles):	3,238
County Seat:	Gunnison

Gunnison County sits just west of the Continental Divide and is located in the southwestern region of the State approximately 200 miles from Denver. Gunnison County participated in the development of and is included in the **Gunnison County All Hazard Mitigation Plan.** Through the hazard identification and risk assessment process, using probability and potential impacts for hazards posing the greatest possible risk, the county identified wildland fire, drought, winterstorms and landslides as the hazards that pose the greatest possible risk.

Wildland/Grassland Fire-According to the Colorado State Forest Service, in 1999 there were 122 subdivisions in the urban/wildland interface. Arrowhead Subdivision has a **Community Wildfire Protection Plan.** The county participates in the **Emergency Fire Fund.**

Drought-Although the temperatures are not conducive to growing produce, the valley does produce a lot of hay which relies heavily on water availability. Gunnison County is now going on four years of drought.

Winterstorm-Historically Gunnison County is one of the coldest places in the Nation, with winter temperatures reaching down to -30 to -40, and has temperatures in the low 30 degree range on summer nights. It is estimated that a power loss of over six hours would result in freezing of water and sewer lines to more than 50% of the population. One death was recorded in 2002 as the result of an avalanche.

Landslide-There are three major areas in Gunnison County that are considered to be conducive to landslide activity. 1) The Black Mesa landslide, earthflow and rockfall corridor of Gunnison and Montrose counties, 2) the Hwy 92 corridor on the north rim of Black Canyon is unsafe much of the time because of minimal design and numerous landslide, debris flow and rockfall areas, and 3) the Red Creek landslide area along US Hwy 50 on the noth shore of the Blue Mesa Reservoir. This landslide area has been the most persistent and troubleson, causing serious periodic closures and repairs of Hwy 50.

Flood-Gunnison County was included in the presidential disaster declaration for flooding during 1984. Landslides and flooding caused over $300,000 in damage and roads and bridges were hit especially hard. Flooding on Quartz Creek destroyed electric poles and disrupted service. The communities of Gunnison, Crested Butte, and Pitkin suffered considerable damage.

History

1984	Presidential Disaster	Flooding
1995	State	Flooding/Landslide
2002	Presidential Disaster	Wildfires
2003	Presidential Emergency	Snow
2006	USDA Disaster	Heat, High Winds, Insect Pests, Late Freeze, Ongoing Drought

The following communities participate in the **National Flood Insurance Program**: Gunnison County (unincorporated), and the Towns of Crested Butte, Marble, and Gunnison. There are five Class I and four Class II dams in the County. All Class I dams have emergency preparedness plans in place. According to the October 1, 2003 **Community Rating System List of Eligible Communities**, both Gunnison County and the City of Gunnison have a community rating of nine.

Earthquake-In 2002 Gunnison County had an earthquake that reached 5.1 on the Richter Scale.

Potential/Current Mitigation Projects

Identify buildings that have the potential for damages due to flooding and mudslides and develop mitigation goals accordingly; wildfire mapping and mitigation plans and projects; update hazard mitigation plan; develop flood plans

Hinsdale County √

Hinsdale County is located in southwestern Colorado and is approximately 275 miles southwest of Denver. Hinsdale County developed and is included in the **Hinsdale County All Hazard Mitigation Plan.** Through the assessment process Hindsdale County identified wildland fire, drought, winter storms and landslides as risks to the community. Pandemic planning has been the primary focus for the last 3 years. The potential for terrorism associated with the K-12 public school has also been recognized. Lake City has earned a **Storm Ready** designation from the National Weather Service. A reverse 911 system is in place and has been tested. In addition an emergency radio override is in place on 106.3 FM. There is no siren system in town however arrangements have been made for the bells at the local churches and school to be rung continuously in the event warning is necessary. The county has an evacuation plan in place. With a grant, the community purchased a backup generator for the town water system.

Hinsdale County views. Photos by Patricia Gavelda and Marv Koleis

Wildland/Grassland Fire-Wildland and structural fires present hazards to Hinsdale County as 96% of the land in the County is national forest. The recreational uses of these lands have grown increasing the likelihood of a human-caused fire. Colorado State Forest Service figures show in 1999 there were 12 subdivisions in the urban/wildland interface area. In addition, the composition and proximity of buildings in Lake City increases the threat of a fire rapidly spreading throughout the town. The County participates in the **Emergency Fire Fund**.

Population (2000 census):	790
% Growth from 1990:	69.2%
County Size (square miles):	1,057
County Seat:	Lake City

Drought-Hinsdale County went through several consecutive years of drought. 2002 was the driest year on record for Hinsdale County and much of the State.

Winterstorm-As with all high mountain areas, winter storms cause problems such as road closures, power outages and avalanche danger in mountainous terrain. It is estimated, that in extreme weather where the temperature of 20 degrees below zero or colder, that power loss of over six hours would result in freezing of water and sewer lines to more than 50% of the population.

Landslide-There are three major areas in Hinsdale County that are considered to be conducive to landslide activity. Those areas are County Road 30, County Road 20 and Highway 149. The most impact would be on transportation routes.

Flood-Hinsdale County has four Class I and three Class II dams. They all have emergencypreparedness plans in place.

The following communities participate in the **National Flood Insurance Program**: Hinsdale County (unincorporated areas) and the City of Lake City.

History

1984	Presidential Disaster	Flooding
2002	Presidential Disaster	Wildfires
2002	USDA Disaster	Drought
2006	USDA Disaster	Drought, Fire, Heat, High Winds

Potential/Current Mitigation Projects

Continue flooding preparation and awareness education; update wildfire prevention plan; update hazard mitigation plan; develop flood plan; wildfire mitigation projects to reduce fuel load; flood projects to reduce risk; increased Pandemic planning and School Terrorism will be reflected the Hazard Mitigation Plan update

Huerfano County

Huerfano County is located in the southeastern region of the State. Huerfano County's main population centers (Walsenburg, La Veta and the Village of Gardner) all lie in floodplains. Huerfano County is starting a PDM/FMA plan in late 2007.

Lathrop State Park Photo from Colorado State Parks website

Flood-The floodplain of the Cuchara River includes approximately half of the town of Walsenburg. The Cuchara River is at high risk of flooding in Walsenberg, La Veta, and Three Bridges. The following communities participate in the **National Flood Insurance Program:** Huerfano County (unincorporated areas), the Town of La Veta, and the City of Walsenburg. Five Class I and three Class II dams are located in Huerfano County. They all have emergencypreparedness plans in place.

Winterstorm-The dangers of winter storms have long been recognized by residents and mitigation measures have been put into place. Because of the rural nature of the County, extended power outages present the greatest risk to Huerfano's residents. In addition, travelers on the major highways risk being stranded during severe winter storms.

History

2002	Presidential Disaster	Wildfires
2002	USDA Disaster	Drought
2003	Presidential Emergency	Snow
2004	USDA Disaster	Drought
2005	USDA Disaster	Ongoing Drought, Crop Diseases, Insect Infestations
2006	USDA Disaster	Drought, Fire, Heat, High Winds

Population (2000 census):	7,862
% Growth from 1990:	30.8%
County Size (square miles):	1,578
County Seat:	Walsenburg

Wildfire-According to the Colorado State Forest Service, in 1999 there were 34 subdivisions totaling 210,000 acres in the urban/ wildland interface area. The highest fire dangers are in Cuchara Valley. This includes the town of La Veta and Cuchara. An overabundance of ground fuel, drought, and decades of strict fire suppression practices have combined to create a severe fire danger for Huerfano County. The County participates in the **Emergency Fire Fund.**

Hail-Thirty-five hail events have been recorded between 1968 and 2003.

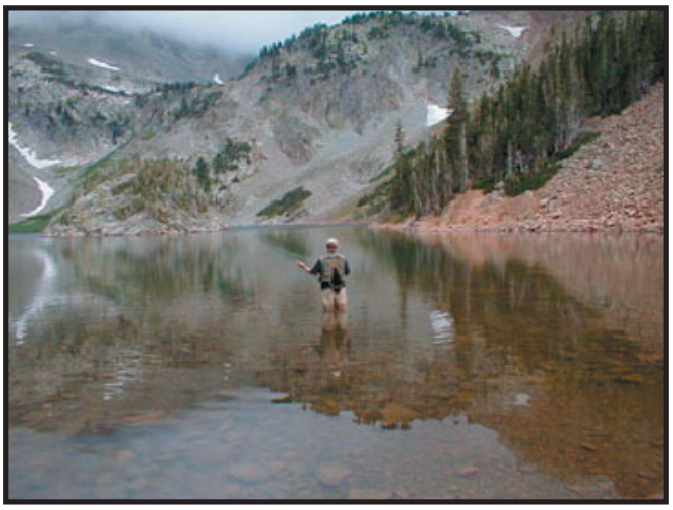
Tornado-Six tornado events were recorded between 1958 and 2003. A 1993 tornado caused over $100,000 in damages.

Windstorm-June 18, 2007…For the first time in over 30 years, the San Isabel National Forest-San Carlos Ranger District experienced a significant blowdown event. An extreme wind event on Wednesday toppled spruce and Douglas fir trees in Custer and Huerfano Counties between Deer Peak and the Greenhorn Mountains.

Potential/Current Mitigation Projects
Local hazard mitigation plan, flood plans, community wildfire protection plans; projects as identified in the plans

Jackson County

Jackson County is located in the northcentral region of the State. In a risk assessment survey conducted by the Colorado Division of Emergency Management in 2003/2004 and again in 2007, the county administrator identified exposure to winterstorms, wildland fire, avalanche, and landslides as the county's most probable exposures to hazard. All areas have developed evacuation plans. The county and their partners have completed many fuels mitigation projects. Capabilities have increased with the addition of a GIS staff person.



Colorado State Forest Photo from Colorado State Parks website

Wildland/Grassland Fire-The threat of wildfire exists throughout most of Jackson County. Mountain Pine and Spruce Bark Beetle has severely affected some areas. Colorado State Forest Service figures show in 1999 there were four subdivisions, totaling 240 acres, in the urban/wildland interface area. The county participates in the **Emergency Fire Fund.** There is a fuels and fire management plan for the county. The county and entities are members of the Northern Colorado Bark Beetle Cooperative. Many landowners are doing FireWise work on their properties. The county has a successful slash/mulch program.

Gould, Grizzly Creek, and Rand have **Community Wildfire Protection Plans.** Jackson County has a Community Wildfire Protection Plan in progress. The Grizzly Creek community identified a WUI zone around their assets approximately 46 square miles. Inhabited areas at potential risk to wildland fire include the Grizzly Creek Subdivision and dispersed private properties both undeveloped and with structures. Projects ranked high are listed to the right. The Rand community identified a WUI zone around their assets approximately 145 square miles. Inhabited areas at potential risk to wildland fire: concentrated private properties in Rand, Howd Draw, Old Homestead, Tierney and Jack Creek, dispersed private properties with/without cabins, homes and other structures, and USFS dispersed campgrounds facilities. Projects ranked high are listed to the right. The Gould community identified a WUI around their community assets including an area approximately 70 square miles. Inhabited areas at potential risk to wildland fire: Whispering Pines Subdivision, dispersed private properties with/without cabins, homes and other structures, KOA Cabins and Campgrounds, State Forest State Parks Headquarters, Moose Visitor Center, Staff Housing and campground facilities, Colorado State Forest Service Headquarters, Ranger Lakes Complex, staff housing, and campground facilities, Never Summer Nordic Yurts, USFS Aspen and Pines Campgrounds facilities and Michigan River Guard Station.

Population (2000 census):	1,577
Percent Growth from 1990:	-1.7%
County Size (square miles):	1,622
County Seat:	Walden

Winterstorm-Closure of roadways is common during winter storms and residents may become isolated, although most have learned to cope with this occurrence. Utility failures for extended periods of time could create emergency situations.

Flood-The Michigan River, which flows through the areas of Gould and Lindland, is a designated high-risk flood area within Jackson County. Due to mountainous terrain, flash flooding could occur on the drainage basins in the region. There are no Class 1 dams in the county, but there are four Class II dams. The Town of Walden participates in the **National Flood Insurance Program.**

History

2002	Presidential Disaster	Wildfires
2003	Presidential Emergency	Snow
2006	USDA Disaster	Drought

Potential/Current Mitigation Projects

Community wildfire protection plans; local hazard mitigation plan; FireWise work; continue slash/mulch programs; water storage projects for fire suppression. Grizzly Creek: complete fuel hazard reduction work in areas within 3-4 miles of the WUI, complete fuel hazard reduction projects on Federal and State lands within WUI, complete fuels management work and create fuel break systems along road right-of-ways in WUI, trim trees along power lines and properly handle slash in WUI, create defensible space and reduce fire hazards on private property, annual defensibility assessments of private property, investigate becoming a FireWise community, investigate insurance and zoning requirements, explore opportunities to complete fire suppression and water storage projects, explore building fire substation, complete evacuation plans; Gould: Gould Stewardship Project, CO Highway 14 power line fuels mitigation project, trimming trees on power lines in Whispering Pines, planning and implementation of Owl Mountain projects to reduce fuel hazards, develop fuel break system along roads in WUI USFS, BLM, CSFS and Jackson County, implement fuel break projects along Gould Loop, near Lohrs' property, adjacent to developed recreation areas and east of Michigan River Ranch, create defensible space and reduce fire hazards on private property, evaluate defensibility of private property, remove fuels along Snow Snakes trail project, dry hydrant placement, monitor use of USFS slash piling area, educate community about Fire Wise concepts, develop evacuation plans. Rand: create ¼ mile fuel break around Rand area, secure funds for fuel hazard reduction projects, complete fuel hazard reduction on Hwy 125 right of way, remove hazardous trees near power lines, create defensible space projects on private property, provide education/information on post harvest slash handling, designate central slash piling sites, explore potential defensible space assistance for senior citizens, update WUI maps, develop evacuation plans.

Jefferson County √

Population (2000 census):	527,056
Percent Growth from 1990:	20.2%
County Size (square miles):	785
County Seat:	Golden

Jefferson County is located to the west of Denver. The region is split between the foothills in the west and the plains in the east. Jefferson County participated in the development of and is included in the **Denver Regional Natural Hazard Mitigation Plan.** Through the assessment process, the county identified thunderstorms(tornado/hail/lightning), winter storms, landslides, drought, fire and flood as the hazards that pose the greatest possible risk. The City of Lakewood has a number of warning systems that can be activated during a natural emergency/disaster to include an outdoor siren warning system, which is comprised of 24 siren sites in Lakewood that can be activated in total, regions or individually, a reverse 911 system, an emergency alert system and a noaa weather radio system. The City of Lakewood recently published an " All Hazard Brochure, "City Of Lakewood Citizens Crime Prevention And Emergency Preparedness Guide". The guide provides natural hazards emergency preparedness information specifically for Lakewood citizens. The Rooney Road Recycling Program was modified to allow for convenient disposal of yard waste, tree branches, leaves, grass clippings and construction waste by residents in 2005. An estimated 10,000 cubic yards of material were recycled in 2006.

Winterstorm-Heavy winter storms affecting the metro area occurred in 1913, 1982, 1997, 2003, and 2006. Heavy snow storms can bring a community to a standstill by inhibiting transportation, knocking down utility lines and by causing structural collapse. Repair and removal costs can be significant.

Landslide-The Clear Creek Canyon rockfall hazard area extends along Hwy 6 from the mouth of Clear Creek Canyon near Golden to the Junction with I-70 east of Idaho Springs. It consists of numerous intermittent to nearly continuous rockfall segments along Clear Creek Canyon. The roadway is closely confined by the walls of the narrow canyon and vulnerability of the traveling public is considered a very high hazard. The hazard identification and risk assessment process identified over 400 households and 60 businesses that are exposed to landslide risk in Jefferson County. The county has developed a dipping bedrock overlay zone that is designed to mitigate development in areas that could be damaged by landslides.

Drought-The region has experienced drought for several years. 2002 was the driest year on record for Denver and much of the State.

Wildland/Grassland Fire-The Colorado State Forest Service reports in 1999 there were 102 subdivisions in the urban/wildland interface. The region plan risk assessment identified over 37,000 households and 4,000 businesses as having a high risk of fire. The major threat from wildfire is in the forested and wildland areas. In 2000, the Hi Meadow fire resulted in the evacuation of approximately 600 residents from Pine and Buffalo Creek, and nineteen subdivisions and 10,800 acres were burned. A total of 51 homes, six out-buildings and one commercial building were lost to the fire. Also in 2000, the El Dorado fire began approximately seven miles southwest of the City of Boulder. The blaze consumed over a 1,000 acres and forced the evacuation of over 125 homes. No structures were lost in the fire. The county received a Fire Suppresion Assistance Grant as a result.

Jefferson County has instituted mitigation measures for wildfires. These include promoting the FireWise public information, requiring defensible space and timber fuel reduction, fire resistant building materials and improved access in new and existing residential developments. The Rooney Road Recycling Program offers a "slash program " to citizens in the metro area.

The county participates in the **Emergency Fire Fund.** Genesee is a recognized **FireWise Community.** Golden Gate Fire, West Metro Fire, Inter-Canyon Fire, Indian Hills Fire Protection Districts, Fairmount Fire, Golden Fire, Elk Creek, Harris Park, South Platte, and Lower North Fork have **Community Wildfire Protection Plans**. Evergreen Fire Protection District has a Community Wildfire Protection Plan in progress. The county is a member of the Coalition of the Upper South Platte. In the West Metro district, three of seven communities received high hazard ratings: Willow Brook, Willow Springs South, and Red Rocks. In the Golden Fire plan moderate risk areas are the north, southwest and southeast.

Flood-Seventeen flood events occured between 1994 and 2003. Flooding is an annual problem along the creeks and drainages of Jefferson County, primarily affecting communities on the eastern edge of the foothills and the western portion of the Front Range. Clear Creek and Bear Creek are both listed as high risk flood areas. Through the hazard identification and risk assessment process 8,400 households and 95 businesses were identified as having a high risk of flooding. The following communities participate in the **National Flood Insurance Program:** Jefferson County (unincorporated), Edgewater, Golden, Lakewood, Westminster, Wheat Ridge, and Morrison. There are 20 Class I dams and 16 Class II dams; all Class I dams have emergency preparedness plans. According to the October 2003 **Community Rating System** List of Eligible Communities, Arvada, Lakewood, Littleton, and Wheat Ridge have a rating of seven, Westminster eight, Morrison and Golden nines. Part of the county is served by the Urban Drainage and Flood Control District.

History

2006	USDA Disaster	Heat, High Winds, Insect Pests, Late Freeze, Ongoing Drought
2006	Presidential Emergency	Snow

Potential/Current Mitigation Projects

Update land development regulations in Englewood; revise building codes and floodplain development regulations in Wheatridge; continue & upgrade Wildland Fuel Management Program; upgrade flood warning systems; develop list of at-risk structures in Wheatridge; update GIS mapping; acquisition and relocation in Lakewood; flood proofing/elevation in Lakewood; promote insurance and critical facility protection in Lakewood; tech hazard assessment; community wildfire protection plans and implement projects as listed; update local hazard and flood mitigation plans; update several flood warning and response plans for Lakewood including dam safety plans, continue recycling center/slash center, projects as defined in The Big Dry Creek North Area Tributaries Outfall Systems Plan Update; WMFPD-defensible space, community fuel breaks, vegetation management-prescribed fire in grasslands and thinning projects; defensible space; FireWise building improvements; outreach

Kiowa County

Population (2000 census):	1,622
Percent Growth from 1990:	-3.9%
County Size (square miles):	1,792
County Seat:	Eads

Kiowa County is located in the southeastern region of the state. The county has an Emergency Alert System (EAS), EPN, outdatd outdoor warning sirens in two incorporated municipalities, and NOAA Weather – All-Hazards radio. A weather monitoring system is currently being installed in the Kiowa County Sheriff's office. The following are some examples of public education regarding natural hazards; distribution of printed emergency preparedness guides (one guide per household) covering year-round severe weather, fires, flooding, pandemic influenza, earthquakes and other hazards/issues; articles in the local newspaper based on seasonal hazards; and the discussion and distribution of information about hazards during the annual health fair. Kiowa County has a mitigation plan in progress. In the 2007 emergency manager survey, he notes that wildfire/prairie fire, tornadoes, and blizzards are the hazards most affecting the county.

Flooding- In 1997 and 1999, Kiowa County experienced heavy rains causing damage to infrastructure. As a result, the county was included in two presidential disasters declarations. The county received Public Assistance funding to repair damaged roads and bridges. Thunderstorms produced six flash floods etween 1994 and 2003. There are no Class I dams in Kiowa County, but there are two Class II hazard dams. In Spring 2007 the Town of Eads finished a project addressing flooding and drainage issues in the south central and east central portions of town. The project redirected flow and increased capacity of drainage system.

Tornado-Tornados are an annual occurrence in Kiowa County. In 1986, a tornado touched down near Cheyenne Wells and Sheridan Lake. Some utilities and one residence were damaged. In 1989, a tornado touched down east of Eads, killing livestock and destroying utilities. In 1994, a tornado caused heavy damage to a livestock facility and minor damage to several homes. In 2001, damaging winds across southeast Colorado plains caused $6 million dollars in damage in the region. Fourty-two tornados have been recorded from 1958 to 2003, with minimal damage reported due to the open country.

Winterstorm-Winterstorms threaten highway travelers and livestock. Twenty-five heavy snow events between 1993 and 2003 were recorded. Entire communities, as well as individual residences, may become isolated due to road closures and suffer utility outages. Due to severe spring snowstorms in April 2001, Kiowa County was one of 14 counties included in the May 2001 presidential disaster declaration. The plains counties incurred over $6 million in damages as a result of storms over two weekends. Broken power poles and downed power lines left thousands without power for days. Kiowa County and all incorporated municipalities declared disasters due to blizzard conditions and conditions following the blizzard in December 2006-January 2007. Conditions included stranded travelers, closed local roads, two closed state highways and hazardous conditions. Kiowa County was included in one of the Presidential snow emergency declarations.

Hail- One hundred and thirty five hail events have been recorded between 1960 and 2003.

Wildland/Grassland Fire-With the recent opening of the National Park Service Sand Creek National Historic Site, NPS has provided some funding for building communication capacity and access to staff for fire prevention/mitigation/containment. Kiowa County stakeholders are currently beginning a community wildfire protection plan in conjunction with the National Forest Service, with completion expected around the end of 2007.

History

1995	State	Flooding
1997	State	Blizzard
1997	Presidential Disaster	Flooding
1999	Presidential Disaster	Flooding, Mudslides, Landslides
2001	Presidential Disaster	Severe Winter Weather
2002	Presidential Disaster	Wildfires
2002	USDA Disaster	Drought
2003	Presidential Emergency	Snow
2005	USDA Disaster	Ongoing Drought, Crop Diseases, Insect Infestations
2006	USDA Disaster	Heat, High Winds, Insect Pests, Late Freeze, Ongoing Drought
2006	Presidential Emergency	Snow

Potential/Current Mitigation Projects

Community wildfire protection plan; local hazard mitigation plan; projects as identified in the local plan

Kit Carson County √

Kit Carson County is located in the northeastern region of Colorado. Kit Carson County participated in the development of and is included in the **Northeastern Colorado Hazard Mitigation Plan.** Through the assessment process the county identified flooding, winter storms, drought, tornados and thunderstorms as the highest hazard risks to the county. The county utilizes Reverse 911, NOAA weather radios, emergency alert system, local media, cable override, public address systems, and sirens to warn the public. Each community is in the process of updating their evacuation plans for the "Community Ready project". Emergency management personnel do extensive educational projects and use training opportunities with the private sector business, civic and church groups, schools, and the public in general with 72 hour preparedness, weather spotter training, and various other specific target subjects for preparedness. The county sponsors annual "Weather Spotter" trainings with NWS and preparedness programs like pandemic flu education. The emergency manager believes that "with the extensive educational programs being implemented in my jurisdiction, the communication , notification, and participation have all increased as well as preparedness in general.

Kit Carson County fair carousel Photo by CDEM

Flood-Eleven flood events occurred between 1993 and 2003, with six of them occuring in the City of Burlington. In 2003, a thunderstorm triggered flash flooding in the City of Burlington. Law enforcement reported one to two feet of water across some city streets. Burlington and Kit Carson County have worked extensively together on several drainage projects due to local development. There is one Class II dam in the county.

Winterstorms-Kit Carson County is threatened annually by severe winterstorms. Between 1993 and 2003, 21 heavy snow events were recorded. Winterstorms isolate residents and communities due to road closures and utility outages. Interstate 70 passes through Kit Carson County; the Interstate is subject to closure during severe winter storm conditions. Motorists may become stranded in remote areas. The county had several winter weather emergencies in 2005 and 2006.

Population (2000 census):	8,011
Percent Growth from 1990:	12.2%
County Size (square miles):	2,171
County Seat:	Burlington

Drought-Drought could affect the entire county due to the agricultural base of the region. A precipitation shortage could affect dry land farming, irrigation, and community water systems. Fire fighting is also hampered by drought conditions.

Tornado-Severe thunderstorms and tornados are common in Kit Carson County. The higher population areas of Burlington, Flagler, Seibert, Bethune, and Vona are vulnerable to tornado activity. Eighty-four tornados were recored between 1971 and 2003. Three of those tornados occured in 1998 and two of them in 1999.

Hail-Two hundred and forty- eight hail events have been recorded between 1958 and 2003.

Wildland/Grassland Fire-Grass fires are common along the railroad tracks, wheat fields, and in the prairies. According to the Colorado State Forest Service, in 1990 there was one subdivision, totaling 30 acres, in the urban/wildland interface area. In 2002, Kit Carson County lost approximately 6,000 acres to wildfires.

History

1990	USDA Disaster	Drought
1997	State	Blizzard
2001	Presidential Disaster	Winter Storm
2002	Presidential Disaster	Wildfires
2002	USDA Disaster	Drought
2005	USDA Disaster	Drought
2006	USDA Disaster	Drought, Fire, Heat, High Winds

Potential/Current Mitigation Projects

Obtain Storm Ready certification; continue to purchase and distribute NOAA weather radios; continue 72-hour kits; promote "Community Ready" for all businesses; continue and expand crop insurance public education; provide reverse 9-1-1 public education; provide a back-up sewage pump to avoid back ups during power losses; construct a community tornado shelter in Burlington

La Plata County

La Plata County is situated in the southwest corner of the State with a topographic layout ranging from high desert in the southern half of the county to high mountain wilderness in the northern half. La Plata County continues to be the largest producer of natural gas in the State. In a risk assessment survey conducted by the Colorado Division of Emergency Management in 2003/2004, county emergency management personnel identified exposure to winterstorms as the county's most probable exposure to hazard.

Animas River Gorge Photo from Colorado State Parks website

Winterstorm-The northern half of the county is subject to severe winter storms due to the high mountainous terrain. Heavy snow, ice, severe winter storms and blizzards are common to La Plata County. Heavy snows can bring a community to a standstill by inhibiting transportation, knocking down utility lines and by causing structural collapse. Repair and snow removal costs can be significant.

Flood-There were 38 flash flood events between 1996 and 2003, 30 of them in Durango. As recently as 2002, flash flooding along the east side of the Animas Valley caused over $1.5 million in property damage. Four rivers flow south from the high mountains in the northern half of the County through mountain valleys into New Mexico. Development along these rivers and tributaries are at risk during large flooding events. Vallecito Creek and the Animas River system pose the greatest threats to hundreds of homes. Seven Class I dams and four Class II dams are situated on the river systems; all have emergency preparedness plans.

La Plata County (unincorporated areas), the City of Durango, and the Towns of Bayfield and Ignacio participate in the **National Flood Insurance Program.** According to the October 1, 2003 **Community Rating System Eligible Communities List,** the City of Durango is rated nine.

Tornado-Four tornados occurred between 1992 and 2002.

Wildland/Grassland Fire-Dry conditions in the southwest have caused several large wildland fires in recent years. The Black Ridge Fire in 2006, BIA Southern Ute Agency land, burned 530 acres.

Population (2000 census):	43,941
Percent Growth from 1990:	36.1%
County Size (square miles):	1,685
County Seat:	Durango

The Trail East fire, on BLM and private land, in 2005 burned 1,068 acres (Montezuma and La Plata Counties). Suppression costs for the 2002 fires were over $10 million dollars. The Valley fire was ignited by lightning and destroyed 22 homes and consumed 400 acres. The Missionary Ridge fire destroyed 50 homes, 22 structures and consumed approximately 70,000 acres. La Plata County continues to catch the eye of the nation and has been featured in several popular travel, recreational, and domestic publications. Many new homes have been constructed in heavily forested wildland/urban interface settings. Land ownership in the county is as follows (acres):

Land Ownership in Acres	Number of Acres
Private	461,185
San Juan National Forest	396,050
Bureau of Land Management	21,823
State of Colorado	23,287
Southern Ute Indian Tribe	179,055
Ute Mountain Ute Indian Tribe	1,685
Total	**1,083,085**

La Plata County has a **Community Wildfire Protection Plan.** Falls Creek Ranch, Edgemont Ranch Unit 1, and Los Ranchitos Estates HOA have Community Wildfire Protection Plans in progress. Many entities in the county are partners in The Firewise Council of Southwest Colorado.

The county CWPP lists the following goals: 1) reduce risk in the WUI, 2) increase public involvement in wildfire prevention and education, 3) reduce ignitability of structures, 4) increase and strengthen the tools for local governments and fire departments to encourage FireWise policies and practices, and 5) increase the number of fuel reduction projects on federal lands in the WUI and other priority areas.

History

2002	Presidential Disaster	Wildfires
2002	USDA Disaster	Drought
2006	USDA Disaster	Heat, High Winds, Insect Pests, Late Freeze, Ongoing Drought

Potential/Current Mitigation Projects

Community wildfire protection plans; flood and hazard mitigation plans; wildfire fuels mitigation; mudslide mitigation; implement wildfire mitigation demonstration projects; increase capacity of the FireWise County of Southwest Colorado

Lake County ✓

Population (2000 census):	7,812
Percent Growth from 1990:	30.0%
County Size (square miles):	380
County Seat:	Leadville

Lake County is located in the central area of the State in the Upper Arkansas Area (UAA) region. Lake County is included in the **Upper Arkansas Area Council of Governments Hazard Mitigation Plan.** The county emergency manager supplied a new risk assessment, completed in 2006, for Homeland Security; The Lake County emergency manager and risk assessment team have identified wildland fire, drought, dam failure, flood, and winter storms as the highest risks (of the natural hazards only). Lake County has limited EAS, a website, and Reverse 911. Lake County has an evacuation plan in place. Public education on natural hazards is provided on the county website. Approximately 74% of the county is federally owned.

Wildland/Grassland Fire-The threat of wildfire increases in dry years as does the risk to life and property due to an increase in the number of people building in the urban/wildland interface. Colorado State Forest Service figures show in 1999 there were 34 subdivisions, totaling 6,159 acres, in the urban/wildland interface area. The county participates in the **Emergency Fire Fund.** Lake County has a **Community Wildfire Protection Plan** and has worked with HOAs on some limited wildfire mitigation. In the risk assessment, a major wildland fire was identified as having a 30% probability of occurrence in a given year.

The Lake County Community Wildfire Protection Plan identifies the following areas of potential risk using road access, fuel considerations, topography, potential for human ignitions, water supply, population and/or resident density, and communications and notifications. The areas are: San Juan Placer area (Ridgeview, Gem Valley, and Homestake), Elk Run near Lodgepole flats, Village of Twin Lakes/Gordon Acres, Beaver Lakes Estates, Sylvan Lakes, Home Stake Trout Club, Mountain View East Mobile Home Park, Piney Run, Twin Lakes Canyon Estates, PanArk, and E.E. Hill.

Flood-The extreme geography in the UAA has the potential for severe flash flooding. There are many campgrounds along the Arkansas River; flash flooding threaten the structures and people located in the area. In the risk assessment, a seasonal flood was identified as having a 30% probability of occurrence in a given year.

Lake County participates in the **National Flood Insurance Program.** The county has three Class I dams and two Class II dams. All have emergency preparedness plans in place.

Drought-The 2002 drought had a severe economic impact in the Upper Arkansas area. By the time summer arrived, the Upper Arkansas River was running well below normal flow levels. The low water, in addition to the nationally publicized drought, caused many people to cancel pre-planned river trips and tourism to the region. Many families rely on ground wells for water supply while ponds and ditches are relied upon by local ranchers for their livestock and crops. The drought caused a number of wells to dry up, forcing many residents to have water "hauled in". In the risk assessment, drought was identified as having a 20% probability of occurrence in a given year.

Winterstorm-The UAA weather is typical of Colorado where sunshine and blue skies change quickly to plunging termperatures and significant snow fall. There are a large number of people who visit the UAA for wintertime recreation. Although most residents of the County have developed a high level of self-sufficiency, there is great concern for the safety of visitors. Quickly changing weather can trap recreationists out in the elements without the neces-sary equipment and supplies. Unlike commuters who are trapped on or near a road, many of these winter activities draw people deep into the wilderness where they can be difficult to locate and rescue. In the risk assessment, a severe winter storm was identified as having a 100% probability of occurrence in a given year.

History

2002	USDA Disaster	Drought
2003	Presidential Disaster	Wildfire
2006	USDA Disaster	Drought, Fire, Heat, High Winds

Potential/Current Mitigation Projects

Improve the defensibility of residential and commercial properties against wildfire; reduce the fuel load at strategic locations in WUI; reduce the vulnerability of municipal water supplies through public education; establish a stormwater management plan; improve early notification capabilities for winter storm events; reduce the vulnerability of community assets to flash floods by improving the administration of FEMA flood-hazard areas; Box Creek Vegetation and Travel Management project; Northwest Leadville Hazardous Fuel Reduction Project; Beaver Lakes: reduce sage brush on west edge, maintain adequate road clearance, mechanical treatments, prescribed burning, thin lodgepole pine along east; Elk Run: water and storage options, burn off slash piles, continue fuels thinning and defensible space on private property; Home Stake Trout Club: defensible space, thinning and fuel break openings, additional dry fire hydrants, cleanup slash and blow-down areas, pursue grants; Homestake: thin lodgepole pine stands along north and west, fuel break, limb coniferous trees in subdivision green belt and encourage Aspen growth, reduce fuel loads in undeveloped lots, use FireWise recommendations, develop maps; Mountain View East: thinning and other treatments along east edge, remove dead and dying trees, limb trees; Piney Run: water storage, dry hydrants, fuelbreak surrounding community, limb trees and reduce ladder fuels and ground fuels; Twin Lakes: thinning fuels in several areas, treatment of grass areas.

Larimer County √

Population (2000 census):	251,494
Percent Growth from 1990:	35.1%
County Size (square miles):	2,614
County Seat:	Fort Collins

Larimer County is located in the northcentral region. The county extends to the Continental Divide and includes several mountain communities. Agricultural focus is on livestock. The county is in the **Northern Colorado Regional Hazards Mitigation Plan.** Through the assessment process, they identified wildland fires, flooding, windstorms and winterstorms as the hazards of greatest risk. The Fort Collins emergency manager reports that they are beginning the update of the plan; in the last year their city risk profile has changed due to the addition of 2BLS III Labs and an increase in hazardous materials coming through and being staged in the Fort Collins area via rail (Ethanol). Larimer County has the following warning systems in place: EPN, NOAA weather radio, EAS, door to door and public address system verbal warnings (such as camp grounds , etc.), highway warning signs (if time permits), plus media broadcasts. Fort Collins has the following warning systems: DIADVISOR system monitoring/alerting for rain, ditch flows for flooding, Meteorlogix System for monitoring weather and sending out alert warnings/advisories, AM530 radio that broadcasts NOAA, reverse 911, Comcast override, EAS and INTRADO. Loveland provides severe weather notifications through NOAA in conjunction with Denver media outlets, the City of Loveland am 16:10 radio, early flood warning system and reverse 911. Fort Collins has evacuation plans and protect-in-place procedures. The Larimer County emergency manager reports that evacuation protocols are in place for Poudre and Big Thompson Canyons. In Fort Collins, both the OEM and the stormwater Utilities and other utilities do public education. The county has distributed tens of thousands of Emergency Preparedness Guides.

Lory State Park Photo from Colorado State Parks

Wildland/Grassland Fire-In 2000 the Bobcat Gulch fire, caused by human error, resulted in the evacuation of 60 households and consumed 10,599 acres of grass, brush and timber and destroyed a number of homes. The county received a Fire Suppresion Assistance Grant. In 2001, the Armageddan fire consumed over 1,000 acres. The fire threatened approximately 100 homes in the Carter Lake area. A Fire Management Assistance Grant was awarded. Total damage estimates throughout the Fort Collins area were approximately $190 million, $135 million of that to the CSU campus. In 2004 the Picnic Rock fire burned 9,800 acres, started by a landowner burning leaves. Colorado State Forest Service figures show in 1999 there were 200 subdivisions, totaling 148,000 acres, in the urban/wildland interface area. A growing number of homes in the interface are increasing the potential for wildfire to take lives and cause property damage. Currently, wildland fire could have an impact on one school, several fire stations, watershed areas and water supply areas within Larimer County. Prescribed fire is a very common mitigation tool utilized in Larimer County. There is a Larimer County Coordinating Group. The county participates in the **Emergency Fire Fund.** Larimer County, Buckskin Heights, East Portal, Little Valley HOA, Poudre Fire Authority, and Crystal Lakes have **Community Wildfire Protection Plans.** Magic Sky, Red Feather Lakes, Sambhala Mountain Center, Estes Park, Ben Delatour Boy Scout Ranch, Loveland, Town of Berthoud, Poudre Canyon, Rist Canyon, Meadowdale Hills, and Glen Haven have Community Wildfire Protection Plans in progress. Local CWPPs are tiered to the Larimer County Fire Plan which is tiered to the PDM plan.

Flood-Flash flood hazard is considered the greatest risk in natural disasters to Larimer County. Several floods in this region have resulted in loss of life and substantial dollar loss to property. Twelve flash flood events occurred between 1994 and 2003. In 1997 a flash flood killed 5 people and injured 40 others when a 10-15 foot wall of water surged through two mobile home parks in Fort Collins. The flooding destroyed 108 homes and damaged 481 others, 86 significantly. There are 49 Class I and 38 Class II dams; all have emergency preparedness plans. The following communities participate in the **National Flood Insurance Program:** Larimer County (unincorporated), Estes Park, Berthoud, Wellington, Fort Collins, and Loveland. According to the October 1, 2003 **Community Rating System Eligible Communities List**, the City of Fort Collins is rated four. There have been upgrades to the Fort Collins flood mitigation plan and maps. Fort Collins has finished several flood mitigation projects recently including floodproofing and drainage improvements. Boxelder and West Vine are ares of concern.

Windstorms Windstorms are common and impact the county annually. Between 1960 and 2003, 105 events were recorded.

Winterstorm-Winterstorms in northern Colorado can severely impact the region in a short period of time. The county was included in the 2003 and 2006 Presidential snow emergency declarations.

History

1999	Presidential Disaster	Flooding, Mudslides, Landslides
2002	Presidential Disaster	Wildfires
2003	Presidential Emergency	Snow
2006	USDA Disaster	Heat, high winds, ongoing drought
2006	Presidential Emergency	Snow

Potential/Current Mitigation Projects

Ensure that utilities in newly developed areas are underground through codes process; update stormwater system; improve emergency warning systems; limit new development in floodplains; evaluate critical facilities located in flash flood areas and plan; install emergency generators in critical facilities; encourage safe rooms in new construction; increase water storage capabilities, including reservoir storage (Box Elder/Clark); require water saving plumbing in new construction; community wildfire protection plans and flood plans; update local mitigation plan and assessments; wildfire fuels reduction projects as identified in the CWPPs; continue and expand public education programs; additional emergency notification.

Las Animas County

Las Animas County is located in the extreme southern region of the State, bordering New Mexico.

Flood-Four flood events between 1994 and 2002 were recorded. A flash flood in 1999 was the most significant river flooding along the Arkansas River since at least 1965. The flood which was induced by persistant rainfall caused over $7 million in property and crop damage. In Las Animas County, the Purgatoire River flows through several towns including Trinidad. In 1955, the Purgatoire flooded, killing two people and causing $4,000,000 in damage. The Apishapa River is also listed as a high-risk flood area. Flooding along this river could cause damage in the towns of Aguilar and Gulnare. In 1999, Las Animas experienced heavy rains that caused damage to infrastructure. As a result, the county was included in a presidential disaster declaration.

The following communities participate in the **National Flood Insurance Program:** Las Animas County (unincorporated areas) and Trinidad. Six Class I dams and one Class II dam are located in Las Animas County. All Class I dams have emergency preparedness plans.

Mine Subsidence-Mine subsidence is another potential hazard. There is high risk for mine subsidence in the western portions of the county due to extensive underground coal mining that has occurred.

Avalanche-Geologic hazards in Las Animas County include avalanches. These areas are located in the western edge of Las Animas County in the Sangre de Cristo Range.

Tornado-Twenty-two tornados have been recorded between 1954 and 2003. Fourteen of them in or near Las Animas.

Thunderstorm-Thirty-seven thunderstorms and high wind events have been recorded between 1956 and 2003. Thunderstorms cause flash floods, hailstorms, and can spawn tornados. From 1950 to 1998, 16 tornados have been reported in the county. One hundred and thirteen hail events were recorded between 1958 and 2003.

Winterstorm-Las Animas was included in the Presidential emergency snow declarations for both winter storm events in 2006. The county reported spending over $1,000,000 in snow removal and emergency rescue operations. Thirty-four heavy snow events between 1993 and 2003 were recorded; in 2003 the county also was included in the Presidential snow emergency declaration.

Drought-Drought could affect the entire county due to Las Animas' agricultural base. Water shortages can affect dry land farming, irrigation, and community water systems. Fire fighting and prevention is also hampered by drought conditions.

Population (2000 census):	15,207
Percent Growth from 1990:	10.5%
County Size (square miles):	4,794
County Seat:	Trinidad

Wildland/Grassland Fire-Wildfires are an annual occurrence in Las Animas County. In 2002 alone, Las Animas County lost approximately 30,000 acres to wildfire and incurred more than $3 million dollars in suppression costs. The potential for larger fires exists and as more people move into the urban/wildland interface the risk increases. Colorado State Forest Service figures show in 1999 there were 78 subdivisions, totaling 431,000 acres, in the urban/wildland interface. Sante Fe Trail Ranch (SFTR) has a **Community Wildfire Protection Plan** and a Forest Health/ Wildfire Mitigation Committee. Large fires have occurred in the Sante Fe Trail Ranch area including the Morley fire in 1978 that burned 300 acres, and the Morley 1 & 2 fires of 1979 and 1980. Three fires burned in the vicinity of the Ranch in 2002 (Crazy French-300 acres, Spring-33,000 acres, and James John -6,800 acres). The Ranch area has an evacuation plan. The plan has listed nine fuelbreak areas, prioritized from one to nine, with estimated costs and acres.

History

1999	Presidential Disaster	Flooding, Mudslides, Landslides
2001	State	Blizzard
2002	Presidential Disaster	Wildfires
2003	Presidential Emergency	Snow
2004	USDA Disaster	Drought
2005	USDA Disaster	Ongoing Drought, Crop Diseases, Insect Infestations
2006	USDA Disaster	Drought, Fire, Heat, High Winds
2006	Presidential Emergency	Snow
2006	Presidential Emergency	Snow

Potential/Current Mitigation Projects

Local hazard mitigation plans; projects as identified in the plans; community wildfire protection plans; projects as identified in the CWPPs; flood plans; projects as identified in the flood plans; (SFTR) Vermejo Park Ranch shaded fuelbreak; (SFTR) dry hydrants and/or Floto Pumps; (SFTR) defensible space around structures; (SFTR) Gallinas Parkway Green lands corridor; (SFTR) Install high volume gate valves on water tanks; (SFTR) evacuation plan revision; (SFTR) Owen Baldwin Parkway; (SFTR) fuel break maintenance; (SFTR) Squirrel, Timber Park, Alpine Meadows, Chipmunk, Turkey Creek, Big Springs, Old Mission Ridge; Tin Cup Trace, Elk Park, Oak Park, Ponderosa Ridge; Tall Timber Trace

Lincoln County √

Population (2000 census):	6,087
Percent Growth from 1990:	34.4%
County Size (square miles):	2,586
County Seat:	Hugo

Lincoln County lies in the plains of eastern Colorado in an area known as the Arkansas Divide. Lincoln County participated in the development of and is included in the **Northeastern Colorado Emergency Management Association Hazard Mitigation Plan.** Through the assessment process, flooding, winter storms, and drought were identified as the county's most frequent hazards. The towns have warning sirens and EAS is used. If warning needs to be given to rural areas or if there is flooding in any location in the county, the Sheriff's Office uses reverse 911. Pamphlets on tornadoes and winter storms are placed in public locations and also at a display at the county fair. Using a grant, the emergency manager was able to obtain weather radios for each residence and public building in Karval, as well as for the fire departments, town halls, recreation facilities, senior centers, libraries, day care centers, schools, all county buildings, the homes of the road & bridge foremen, the hospital, medical clinics, nursing homes, assisted living facilities, low-income housing and other high traffic areas or meeting locations in all of the incorporated towns in Lincoln County. Karval is an unincorporated community and did not have the funding to purchase a warning siren, so the weather radios were an excellent alternative. By placing the radios in the other locations throughout the county, advance warning can be given where larger populations are congregated or the movement of people to shelter would take extra time.

Lincoln County Photo by Marilyn Gally

Flood-From 1998 to 2003, four flood events were reported. In 1998 torrential rain, along with hail caused flooding and flash flooding across southern Lincoln County. Hail up to 8 inches deep covered the roadway just east of Karval. In 2002, very heavy rainfall caused flash flooding across north-central Lincoln County washing out Highway 71. There is one Class I dam located in the County and two Class II dams. The Class I dam has an emergency preparedness plan in place.

The Town of Limon participates in the **National Flood Insurance Program.**

Winterstorm-Nine heavy snow events have been recorded between 1993 and 2004. Heavy snow, ice, severe winter storms, and blizzards are common to northeastern Colorado.

Drought-Lincoln County has experienced 6 multi-year droughts since 1893. Since 1999, Colorado has entered another period of significant drought. As of June 2004, Colorado is still being impacted by the drought.

Hail-In 1998 torrential rain, along with hail caused flooding and flash flooding across southern Lincoln County. Hail up to 8 inches deep covered the roadway just east of Karval.

Tornado-Tornados can and have occurred in Lincoln County. From 1951 to 2003, 72 tornados have been recorded. In 1990, a tornado ripped through the town of Limon causing $25 million in damages. Many residences, public utilities, and businesses suffered extensive damage. In 1999, two tornados touched down causing extensive damage north of Genoa. Damage estimates were over $3 million dollars.

High Winds-The county is subject to significant, but non-tornadic winds with alarming frequency.

History

1990	State	Tornado
1997	Presidential Disaster	Flooding
2001	Presidential Disaster	Winter Storm
2002	USDA Disaster	Drought
2004	USDA Disaster	Drought, Freeze
2005/6	USDA Disaster	Drought, Wind, Hail, Heavy Rain
2006	USDA Disaster	Drought
2006	Local	Blizzards

Potential/Current Mitigation Projects
Obtain Storm Ready certification; tornado and severe weather shelters; promote targeted flood insurance education to the 58 uninsured buildings located in a floodplain in Limon; research the development of erosion/sediment control regulations

Logan County √

Logan County is located in the northern region of the State in the great plains. Logan County participated in the development of and is included in the **Northeastern Emergency Management Association Hazard Mitigation Plan**. Flooding, winter storms and drought are the most frequent hazards experienced by the county.

North Sterling State Park Photo from Colorado State Parks website

Flood-From 1995 to 2003, nine flood events were reported. In July 1997, 14 inches of rain fell in nine hours in the Pawnee Creek area causing flooding in the Towns of Atwood and Sterling resulting in a presidential disaster declaration. Flood damages amounted to $20 million countywide. The City of Sterling and Logan County successfully competed for hazard mitigation funds to improve drainage. There is one Class I dam in Logan County.

The following communities participate in the **National Flood Insurance Program**: Logan County (unincorporated areas), the Cities of Crook and Sterling, and the Town of Fleming.

Winterstorm-Due to severe spring snowstorms in April 2001, the County was one of 14 included in the May 2001 presidential disaster declaration. The plains counties incurred over $6 million in damages as a result of storms over two weekends. Broken power poles and downed power lines left thousands without power for days.

Drought-Beyond the obvious impacts of crop loss and residential water-use restrictions the drought has impacted the cattle industry by forcing ranchers to sell their livestock.

Tornado-Forty-nine tornadoes were reported between 1950 and 2003, and as recently as June 2004, a tornado touched down in the Sterling community. Damage assessment estimates were over $1 million dollars.

Population (2000 census):	20,504
Percent Growth from 1990:	16.7%
County Size (square miles):	1,827
County Seat:	Sterling

Wildland/Grassland Fire-According to the Colorado State Forest Service, in 1990 there were six subdivisions totaling 240 acres in the urban/wildland interface. In 2002, scattered high based thunderstorms, producing frequent lightning but very little rain, ignited dozens of grass fires across eastern Weld, Logan, Morgan and Washington Counties. Outflow winds coupled with an already strong surface pressure gradients and extreme drought conditions, allowed the fires to quickly scorch over 12,000 acres of farmland.

History

1969	Presidential Disaster	Flooding
1980	State	Flooding
1980	State	Grasshoppers
1997	Presidential Disaster	Flooding
2000	USDA Disaster	Drought
2000	USDA Disaster	Freezing Temps
2001	Presidential Disaster	Winter Storm
2002	USDA Disaster	Drought
2002	Presidential Disaster	Wildfires
2005	USDA Disaster	Ongoing Drought, Crop Disease, Insect Infestation
2006	USDA Disaster	Heat, High Winds, Ongoing Drought

Potential/Current Mitigation Projects

Update/develop hazard, fire, and flood mitigation plans; Promote targeted flood insurance campaigns to uninsured buildings in Sterling and Crook; obtain Storm Ready certification; implement emergency warning system in Merino; determine estimate for replacement cost of critical facilities in the floodplain; floodproofing in Merino; drainage improvements in the City of Sterling

Mesa County √

Population (2000 census):	116,255
Percent Growth from 1990:	24.8%
County Size (square miles):	3,312
County Seat:	Grand Junction

Mesa County is located in the western region of the State and borders Utah. Mesa County, which is frequently referred to as the Grand Valley, is noted for its wide variety of agricultural produce making them particularly suspectable to drought. In a risk assessment survey conducted by the Colorado Division of Emergency Management in 2003/2004, emergency management personnel identified flooding, drought, wildland fire and extreme heat as hazards threatening the Mesa County area. The county has an emergency alert system and emergency preparedness network. Public information outreach include presentation to community organizations and the Inside Mesa County Class. The Interagency Fire Advisory Board and 5-2-1 Drainage Authority promote mitigation projects. In 2000, Mesa County put Land Development Code standards in effect for new construction in hazard risk areas. Hazards included are wildfire, land slides, gamma radiation, mud flows, rock falls, snow avalanches, possible mine subsidence, shallow water table, open quarries, floods, and polluted or nonpotable water supply (§7.6 General Site Planning Standards).

Photo by Jim Soule Colorado Geological Survey

Flood-Floods have occurred frequently throughout Mesa County; nineteen flood events were recorded between 1994 and 2003 that have caused extensive damage. Flooding in the county is mostly caused by snowmelt in the larger drainage basins and by cloudbursts over the smaller drainage basins. Floods occurred in 1884, 1917, 1920, 1921, 1935, 1952, 1957, 1983 and 1984 on the Colorado River; in 1884, 1920, 1921 and 1957 on the Gunnison River, and in 1884, 1909, 1911, and 1958 on the Dolores River. Mesa County (unincorporated areas), Collbran, Fruita, DeBeque, Grand Junction, and Palisade participate in the **National Flood Insurance Program.** There are nine Class I and 35 Class II dams. Grand Junction is currently working on the Big Pipe project utilizing Pre-Disaster Mitigation funds.

Drought-Mesa County is agricultural in nature and has a large number of orchards and vineyards; long periods of drought are a potential economic loss for the county.

Wildland/Grassland Fire-Between 1999 and 2003, 10 wildland fires have been recorded in the county. Historically, wildfires have occurred each spring and summer during lightning season, spring burning or irrigation ditches and in the fall when crop residue is burnt. Based on the development taking place in the county, areas that are at highest risk include the Plateau Valley area, Gateway and Glade Park. According to the Colorado State Forest Service, in 1999 there was one subdivision, totaling 30 acres, in the urban/wildland interface area. Much of Mesa County's public land is used for recreation increasing the risk of human-caused fires. Drought also increases the risk of wildfire as it did in the summer of 1994 when there were several fires in Mesa County. The county is currently finishing a wildfire assessment project. This project was funded through a National Park Service Mitigation grant with in-kind from Mesa County. They identified an area within a ¼ mile of the National Monument and Redlands Area, and conducted a wildfire assessment survey. They'll look at all factors related to the wildland-urban interface area, take a GPS reading of the structure(s) located on each parcel and a photograph of the structure(s). Software allows them to capture data on type of structure, hazards surrounding the structure, fuel types, slope, aspect, ingress/egress routes, etc. This data is being compiled and a community wildfire protection plan will be developed. This information will be made available to homeowners with recommendations on how they can improve their defensible spacing.

The county participates in the **Emergency Fire Fund.** Mesa County has a **Community Wildfire Protection Plan.** Colorado National Monument and Glade Park have Community Wildfire Protection Plans in progress.

Extreme Heat-Mesa County is subject to extreme heat. This combined with the drought makes the county vulnerable to wildland fire and economic loss due to the agricultural nature of the area.

Landslide-The Lamplite Park landslide is a small landslide area, but it has been responsible for the destruction of ten homes that were placed on the backfill leadscarp area of an active landslide in the early 1980's. It is a classic case of ill advised land-use in a recognized active landslide area. The danger that existed to residents of the most seriously affected homes, from possible structural collapse or fire and explosion from ruptured gas lines, was mitigated by the removal of those homes by the City of Grand Junction. Another critical landslide area is the De Beque Canyon landslide area, which has potentially very severe public safety, transportation, and economic consequences.

History

1984	Presidential	Flooding
1995	State	Flooding
2002	Presidential Disaster	Wildfires
2002	USDA Disaster	Drought
2006	USDA Disaster	Drought

Potential/Current Mitigation Projects

Update/develop local hazard mitigation, flood mitigation, and community wildfire protection plans; drainage improvements in Grand Junction; drainage improvements in Mesa County; construction of detention/retention ponds; update Flood Insurance Rate Maps; flood insurance education; Citizen's guide for 2007; City of Grand Junction Big Pipe Project; Mesa County Wildland Fire Mitigation Project; wildfire risk assessment

Mineral County

Mineral County is located in the northwest corner of the San Luis Valley and is primarily in the mountains. The principle population center in the county is the Town of Creede.

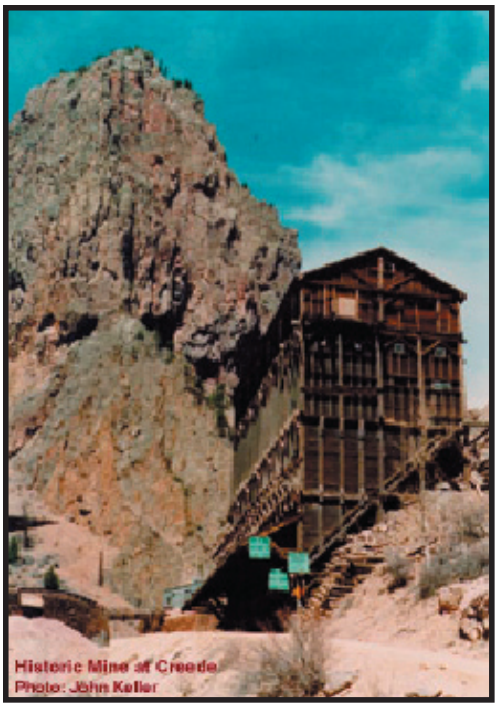


Photo by John Keller
From Department of Natural Resources website

Flooding-In the Creede area, the Rio Grande River is at high risk of flooding. This river flows into the county from the northwest, downstream from the Rio Grande Reservoir in Hinsdale County. If this dam were to break, Highway 149 and a number of residences would be threatened. To help offset this hazard, Rio Grande Reservoir has an emergency preparedness plan in place.

There are three Class I and seven Class II dams in the county. The Class I dams all have emergency preparedness plans in place.

The following communities participate in the **National Flood Insurance Program:** Mineral County (unincorporated areas) and the Town of Creede.

Earthquake-At least three earthquakes have been recorded near Creede. Earthquakes of damaging intensity could occur in this area. The possibility of damaging earthquakes calls into question the safety of dams in the area.

Landslide-The Wolf Creek Pass area along US Hwy 160 has a high potential for landslides and rockfalls. It has a long history of high maintenance and road closures from landslides, debris flows, rockfall and snow avalanches. Many cut-slope and road-fill failures have been due to unstable clay-rich volcanic rocks and glacial debris that failed during heavy snowmelt runoff. The Colorado Department of Transportation has been very active in this serious hazard area and, in the past 15 years, has mitigated many of the most serious hazards.

Population (2000 census):	831
Percent Growth from 1990:	48.9%
County Size (square miles):	921
County Seat:	Creede

Winterstorm-The major risk from winter storms is to travelers or recreational visitors. Roadways often become impassable requiring rescue activities. Residents are use to the severe winters and are, for the most part, prepared. Power outages could create or complicate emergency situations. Avalanches are common on steep slopes located throughout the county. In these same areas, mudslides are a problem during wet seasons.

Wildland Fire-Mineral County is mainly National Forest and Federal Wilderness Lands (90%). Colorado State Forest Service figures show in 1990 there were seven subdivisions, totaling 1,540 acres, in the urban/wildland interface area. The threat of wildfire is high, particularly in years of limited snowpack and drought. The County participates in the **Emergency Fire Fund.**

History

2002	USDA Disaster	Drought
2002	Presidential Disaster	Wildfires
2006	USDA Disaster	Drought, Fire, Heat, High Winds

Potential/Current Mitigation Projects
Local hazard, fire, and flood mitigation plans; projects as identified in the mitigation plans; refurbish the "flume" waterway through Creede

Moffat County

Moffat County is located in the extreme northwest region of the State. In a risk assessment survey conducted by the Colorado Division of Emergency Management in 2003/2004, county emergency management personnel identified winterstorms as the hazard most threatening the Moffat County area.

Photo by Chris Carroll
Photo from Department of Natural Resources website

Winterstorm-Heavy snow, ice, severe winter storms and blizzards are common to the northwestern region of the State. Winter storms in northwestern Colorado can severely impact the region in a short period of time. Disruption of transportation systems, utility outages, school cancellations and delayed emergency response are all potential results of a winter storm.

Wildfire-Wildfire is a problem in many areas of the county. A large number of oil/gas wells in the area increase the wildfire hazard as well as the possibility for a hazardous materials incident. In 2000, wildfire consumed over 11,000 acres in extreme northwest Colorado and again in 2001 wildfire consumed 3,243 acres of rangeland and forest. In 2002, wildfire consumed over 3, 000 acres and cost approximately $2 million dollars to fight. The county participates in the **Emergency Fire Fund.**

In 2003, Moffat County completed the last phase of a county-wide fire planning effort. The four communities identified at greatest risk from wildfire in the county were Greystone, Wilderness Ranch, Bakers Peak, and Knez Divide.

Earthquake-At least six earthquakes have been recorded in the county. There is a possibility of an earthquake of damaging intensity occurring.

Flood-The Yampa River and Fortification Creek in the Craig area are listed as high risks for flooding. Dinosaur National Monument has several campgrounds near the banks of the Yampa River. In 1984, damage occurred to roads, bridges and other facilities. In addition to flood damage, mudslides caused extensive damage, including over $0.5 million in damage to County Road 51.

Population (2000 census):	13,184
Percent Growth from 1990:	16.1%
County Size (square miles):	4,754
County Seat:	Craig

Four flood events have occurred between 1995 and 2003. The following communities participate in the **National Flood Insurance Program:** Moffat County (unincorporated areas) and Craig. Moffat County has one Class I and three Class II dams located within the county. The Class I dam is Elkhead Creek and it does have an emergency action plan in place.

History

1984	Presidential Disaster	Flooding
2002	Presidential Disaster	Wildfires
2002	USDA Disaster	Drought
2004	USDA Disaster	Drought, Hail, Freeze
2006	USDA Disaster	Drought

Potential/Current Mitigation Projects

Local hazard mitigation plan; projects as identified in the plan; community wildfire protection plans; flood mitigation plans; geologic hazards mapping; Greystone-fuelbreaks on south and north ends, thinning in pinyon juniper, fuel reduction in dense safebrush stands/brush beater on east side of community. Knez Divide-open area treatment, brush beating, mechanical, or hand thinning around transmissions line structures; Bakers Peak-reduce fuel density along roads with shaded fuel break, burn or remove slash; Wilderness Ranch-clear full width of ROW using brush beating or other mechanical means along roads, slash should be removed or burned.

Montezuma County

Montezuma County is located in the extreme southwestern region of the State. In the Montezuma County Community Development Action Plan 2006, Project 21, ranked as high priority, is as follows: Public/Private Lands: Maintain Sustainability of Ponderosa Pine and Pinon Forest. The expected outcomes and actions include the following:fire risk mapping completed; fire risk is reduced and timber products industry is strengthened; improve forest health; control Pine Beetle infestation; reduce risk to life and property and protect watershed/community water supplies; and defensible space education resulting in defensible space created around residences. Project 52, ranked high priority, involves Agriculture: Strengthen & Support County's Agricultural Economy ... Deal with impacts around drought.

Mancos State Park Photo from Colorado State Parks

Flood-Four flash flood events have been recorded between 2002 and 2003 primarily in the Cortez area causing approximately $20,000 in damages. The Mancos River and McElmo Creek present the most significant flood hazards to the residents of Montezuma County. Both are listed as high risk flood areas and threaten portions of Cortez and Mancos. Property in Mancos has sustained flood damage several times since 1970. The following communities participate in the **National Flood Insurance Program:** Mancos, Montezuma County (unincorporated areas), Cortez, and Dolores.

Winterstorm-Severe winter storms often cause emergency situations. Snow depths can exceed 52 inches and can be accompanied by extremely low temperatures and high winds. This can cause road closures, power loss, and livestock loss. Avalanches occur on a yearly basis, most in back country areas, which presents a hazard to skiers and winter recreationists.

Mudslide-Mudslides are common on the steeper slopes in the county and may cause temporary road closures. The entrance to Mesa Verde National Park has several large active landslide areas that continues to be a very high-priority landslide area for Montezuma County and has been under heavy maintenance and reconstruction on an annual basis. Closures and detours are a serious and frequent detriment to the National Park.

Drought-Drought is of particular concern to Montezuma County. During dry years water rationing is common. Drought has not caused a loss of human life, but has caused agricultural and livestock losses. Wildfire risk is increased during drought periods.

Population (2000 census):	23,830
Percent Growth from 1990:	27.6%
County Size (square miles):	2,094
County Seat:	Cortez

Hail-Fourteen hail storms have been recorded between 1992 and 2003. A 2003 hailstorm did extensive damage to residential and commercial buildings. Estimates of property and crop damage are over $1 million dollars.

Wildfire/Grassland Fire-The Colorado State Forest Service, in 1990 reported there were 90 subdivisions totaling 9,500 acres in the urban/wildland interface. The Weaver fire in 2006, BIA Ute Mountain Agency, burned 679 acres. The Cash fire in 2005, on BLM and private land, burned 171 acres. The Trail East fire (Montezuma and La Plata) in 2005 on BLM and private land, burned 1,068 acres and 193 acres and a dwelling on BIA Ute Mountain Agency land. The Well fire in 2005, on BIA Ute Mountain Agency land burned 377 acres. The Well fire in 2004 on BIA Ute Mountain Agency land burned 1,100 acres. In 2002 lightning caused a fire in Mesa Verde National Park that caused evacuation and closure of the Park. The fire consumed over 2,600 acres, a total of seven structures were destroyed including two houses, a water tank, and a sewage treatment plant. The county participates in the **Emergency Fire Fund.** Montezuma County has a **Community Wildfire Protection Plan**. Cedar Mesa Subdivision has a Community Wildfire Protection Plan in progress. Cedar Mesa Ranches Fire Plan states "The plan calls for creating a fire break along Cedar Mesa's southern boundary. This boundary lies upslope from Mesa Verde Park, and since prevailing winds are from the south, a fuel break along this boundary will help to protect the subdivision from fires that may start in Mesa Verde. Another fire line will be cleared on the western boundary where Cedar Mesa adjoins BLM land. The first area to be treated will be along the entrance road, since it is the escape route for residents, and a heavily timbered area. The entire subdivision will be treated over a period of five years, with the highest priority areas being done first. In addition, individual homeowners are encouraged to create defensible space around their own homes. ... The Homeowners Association hopes to find an open space within the subdivision where all the slash can be hauled and burned communally, so that individual owners do not have to burn their own debris." Several entities in the county are partners in The Firewise Council of Southwest Colorado.

History

1996	Local	Wildfires
2000	Local	Wildfires
2000	USDA Disaster	Wildfires
2002	Presidential Disaster	Wildfires
2002	USDA Disaster	Drought
2006	USDA Disaster	Freezes
2006	USDA Disaster	Drought, Fire, Heat, High Winds

Potential/Current Mitigation Projects

Local hazard mitigation plan, community wildfire protection plans and flood mitigation plans; geologic hazards mapping; wildfire projects as listed in fire plans; mitigation projects as listed in mitigation plan

Montrose County

Population (2000 census):	33,432
Percent Growth from 1990:	36.9%
County Size (square miles):	3,007
County Seat:	Montrose

Montrose County is located in the southwest region of the State on the western slope of the Rocky Mountains. Montrose County currently has a PDM project to do a PDM plan. The Colorado Geological Survey is completing phase one of the project and will provide the geologic hazard maps to the county for their risk assessment.

Flood-The Cimarron River is a high-risk drainage threatening the Town of Cimarron and several subdivisions. Floods on the Uncompahgre River have disrupted highway, road and rail traffic, inundated structures, damaged power, water, and sewer systems, and caused agricultural damage. Floods in 1983 and 1984 caused $300,000 in damages to public property. Floods in 1984 occurred in Montrose, Naturita, Olathe, and several unincorporated areas of the County. Montrose County was included in the 1984 presidential disaster declaration for flooding. A flood in 1996, caused $200,000 in property damage in and around Naturita. The following communities participate in the **National Flood Insurance Program**: Montrose County (unincorporated areas), the City of Montrose, and the Towns of Naturita and Olathe.

There are six Class I dams and one Class II dam located in the county. The owners have emergency preparedness plans.

Drought-Montrose is an agricultural county dependent upon water for survival. The Project 7 Water Authority provides water through the historic Gunnison Tunnel. A season of drought or the collapse of the tunnel would cripple the agricultural community.

Wildland/Grassland Fire-Wildfire occurs almost yearly in Montrose County and drought increases this risk. Historically, wildfires have only destroyed forest, but with people moving into the urban/wildland interface areas, increasing numbers of structures and people are at risk. In 2002 lightning strikes ignited several fires in the Bucktail Creek area on the Uncompahgre Plateau and consumed 3,633 acres of forest. Colorado State Forest Service figures show in 1990 there were 92 subdivisions, totaling 10,580 acres, in the urban/wildland interface. The county participates in the **Emergency Fire Fund.** Horsefly Fire Protection Association has a Community Wildfire Protection Plan in progress.

Landslide- The Black Mesa landslide, earthflow and rockfall corridor is an active landslide area.

History

1984	Presidential Disaster	Flooding
2002	USDA Disaster	Drought
2002	Presidential Disaster	Wildfires
2006	USDA Disaster	Heat, High Winds, Insect Pests, Late Freeze, Ongoing Drought

Potential/Current Mitigation Projects

Local hazard mitigation plan; projects as identified in the local hazard mitigation plan; community wildfire protection plans; projects as identified in CWPPs; flood mitigation plans; geologic hazards mapping

Morgan County √

Population (2000 census):	27,171
Percent Growth from 1990:	23.8%
County Size (square miles):	1,282
County Seat:	Fort Morgan

Morgan County is located in the northeastern region of the State in the high plains and is primarily agricultural. Morgan County participated in the development of and is included in the **Northeast Emergency Management Association Hazard Mitigation Plan.** Through the assessment process, winter storms, windstorms, drought, flood, hail and tornado are identified as the hazards most frequently occurring in the county. The county received a **Storm Ready** designation from the National Weather Service in 2001 and Morgan County was in the **Project Impact Program** as a 1999 community. The county utilizes a variety of warning system capabilities, including outdoor warning sirens, cable override, radio/pagers, local radio stations, and NOAA weather radios. There is an evacuation plan. Public information outreach includes public service announcements, hazard catalogs, and civic talks. GIS is starting from the ground up and is expected to be of benefit to all agencies.

Jackson Lake State Park Photo from Colorado State Parks website

Winterstorm-Fourteen heavy snow events recorded between 1993 and 2003. Heavy snow, ice, severe winter storms and blizzards are common to northeastern Colorado causing road closures, school cancellations and power outages.

Tornado-Between 1955 and 2003, 60 tornados were reported in the county. Tornados have been documented in or near Wiggins, Ft. Morgan, Brush, and Goodrich. In the past three years, a tornado siren was installed in the Morgan Heights Addition.During the Project Impact days the local FFA students in Weldon Valley constructed a FEMA approved tornado shelter in the basement of the day care building. This shelter has been used several times due to severe weather.

Windstorm-High winds, tornadoes and hail are associated with severe summer storms, which occur almost daily throughout the spring, summer and fall in northeastern Colorado.

Hail-Hail is a major cause of agricultural losses in Morgan County. Morgan County has experienced 17 hail events, between 1950 and 2003, with hail exceeding 2 inches in diameter.

Drought-Because Morgan County is primarily agricultural, the most critical impact of drought is crop loss. 2002 was the driest year on record.

Flood-Eleven flood events have been recorded between 1950 and 2003. In July 1997, 10 inches of rain fell in 15 hours near Schaefer Draw. The town of Weldona flooded and homes and businesses sustained damage. Flooding affected 15,000 acres, 36 homes and six businesses costing over $1 million dollars in damages. In addition to the 1997 floods, significant flood events have occurred in Morgan County in 1905, 1935, 1938, 1965 and 1995. Significant flood events in Brush occurred in the years of 1921, 1930, 1935, 1939, 1940, 1955 and 1965.

Flooding along the South Platte River could affect low-lying areas in Orchard, Goodrich, Weldona, Log Lane Village, Fort Morgan, and Snyder. Flash flooding is possible along many creeks, including Kiowa and Beaver Creeks, and occurs frequently during severe thunderstorms.

The following communities participate in the **National Flood Insurance Program**: Morgan County (unincorporated areas) and the Cities of Brush, Fort Morgan, and Wiggins. According to the October 1, 2003 **Community Rating System Eligible Communities List**, the City of Brush is rated a nine. There is one Class I and three Class II dams in the county. The Class I dam has an emergency preparedness plan in place.

Recent projects include Wiggins rebuilding the road that passes through the land formation on the west side of town and Flood Gates were installed at a local restaurant. The Town of Brush is conducting a stormwater project.

Wildland/Grassland Fire-The Colorado State Forest Service in 1990 reported there were seven subdivisions, totaling 280 acres, in the urban/wildland interface area.

History

1996	Local	Tornado
1997	Presidential Disaster	Flood
1998	Local	Hail
2001	Presidential Disaster	Winter Storms
2002	USDA Disaster	Drought
2003	Presidential Emergency	Snow
2006	USDA Disaster	Drought, Fire, Heat, High Winds

Potential/Current Mitigation Projects

Local hazard, fire and flood mitigation plans; siren upgrades for Towns of Hillrose, Snyder and Weldona; additional sirens; tornado and severe weather shelters; determine best mitigation options for the nine critical facilities located in a floodplain in Brush; conduct a targeted flood insurance campaign; Town of Brush stormwater project; hazards awareness campaigns

Otero County

Otero County is located in the southeastern region of Colorado. In a risk assessment survey conducted by the Colorado Division of Emergency Management in 2003/2004, county emergency management personnel identified, using probability and potential impacts for hazards posing the greatest possible risk, winter-storms, wind storms, fire, hail storms and extreme heat as the hazards that pose the greatest possible risk.

Winterstorm-Winter storms bring about road closures and isolation of residents and communities. On October 24, 1997 a blizzard hit the county that killed cattle causing approximately $4 million in damages.

Windstorm-Sixty-six thunderstorms and high wind events were recorded between 1957 and 2003.

Flood-In 1999, heavy flooding occurred between Rocky Ford and La Junta along the Arkansas River. Portions of northern La Junta were under five to six feet of water, which damaged or destroyed over 250 homes and businesses. Many areas of Otero County are susceptible to flash flooding induced by heavy rains. Areas of high risk include the King and Anderson Arroyos. The Arkansas River could produce flooding which would inundate large portions of La Junta. The county successfully competed for funding from various hazard mitigation sources and has acquired and demolished 58 homes that were substantially damaged. The Colorado Department of Transportation and the county also secured funding for a project to improve drainage in the Rocky Ford area. The following communities participate in the **National Flood Insurance Program**: Otero County (unincorporated areas), the Cities of La Junta and Rocky Ford, and the Town of Manzanola.

Although no high hazard dams are located in the county, residents along the Arkansas River are at risk if the dam upstream were to fail. There are seven Class II dams.

Tornado-Spring and summer are accompanied by the threat of severe thunderstorms, flash floods, and tornados. Twenty-two tornados have been reported in this county from 1953 to 2003 and 95 hail events between 1957 and 2003.

Drought-This heavily agricultural area can suffer extensive economic damage in times of drought and makes the area vulnerable to hail and high winds. These conditions also increase the risk of wildfire.

History

1997	State	Blizzard
1997	Presidential Disaster	Flooding
1999	Presidential Disaster	Flooding, Mudslides, Landslides
2001	State	Blizzard
2002	Presidential Disaster	Wildfires
2002	USDA Disaster	Drought
2005	USDA Disaster	Drought, Wind, Hail, Heavy Rain
2006	USDA Disaster	Heat, high winds, ongoing drought

Population (2000 census):	20,311
Percent Growth from 1990:	0.6%
County Size (square miles):	1,267
County Seat:	La Junta

Potential/Current Mitigation Projects
Local hazard, fire and flood mitigation plans

Ouray County

Population (2000 census):	3,742
Percent Growth from 1990:	63.1%
County Size (square miles):	540
County Seat:	Ouray

Ouray County is located in the southwestern region of Colorado. In a risk assessment survey conducted by the Colorado Division of Emergency Management in 2007, the county emergency manager updated the risks including fire, flood, and landslide/rockfall as the three high natural hazards. Winterstorm and avalanche continue to be rated as medium-high hazards threatening the county based on probability and severity. The county is currrently working on an FMA/PDM plan. The county has Reverse 9-1-1 and the emergency alert system. County buildings have evacuation plans. Per the emergency manager, Ouray County requires hazard reviews, and if necessary, mitigation plans in order to obtain a building permit. Capability has increased in the county including more GIS work being completed through 9-1-1.

Winterstorms-Winter storms and avalanches are an annual problem in this high mountain county. Tourists are at greatest risk; local residents have adapted to and are prepared for these conditions. Fifteen major avalanche chutes are located in Ouray County, as well as numerous minor chutes.

Wildland/Grassland Fire-Colorado State Forest Service figures show in 1999 there were 68 subdivisions, totaling 2500 acres, in the urban/wildland interface. Horsefly Fire Protection Association has a Community Wildfire Protection Plan in progress. Several years ago, through partnerships, wildfire mitigation videos were developed called "How To Set Up CWPPs For Your Community" and the sequel "You Make the Difference." Also Ouray County, Log Hill Fire Protection District, And Horsefly Fire Association (an element of the Sheriff's Office), have all undertaken steps to improve access/egress and fuels reduction in wildfire risk areas. Ouray County participates in wildfire treatments planning and supports the federal agencies in executing treatments including prescribed fire. The county participates in the **Emergency Fire Fund.**

Ouray County, CO -- Wildfire Hazard Mitigation Regulations
In 1997, county officials adopted wildfire mitigation regulations to safeguard life and property. The standards apply to all new residential structures. The guidelines may be viewed in their entirety on the Ouray County website.
24. Wildfire Mitigation Regulations
24.1 Purpose
These regulations are for the purpose of reducing the threat of wildfire and the resulting damage to property as a result of fire. Ouray County has extensive forested and high desert lands that are subject to drought conditions that significantly increase the fire danger. Most of the County is a rural environment with relatively low density and with many residential dwellings located in forested or semi-forested areas. Ouray County is served by three locally based volunteer fire departments with specific district responsibilities and by the Montrose Fire District on the north end of the County. A significant amount of the County is not included in a fire district and some private properties do not have fire-fighting service available.

These regulations are intended primarily to improve the fire safety of structures and to reduce the threat of personal injury or residential loss of life and/or property resulting from fires. Implementation of accepted fire safety techniques and the availability of on-site fire fighting capability, primarily the availability of an adequate source of water, will reduce the potential for personal injury or death and/or the loss of property from fires.

24.2 Applicability
These regulations apply to: New Regular Planned Unit Developments (PUD's) ... Intrafamily and Limited Planned Unit Developments (PUD's) ... All new residential structures. Residential structures ..., that are increased 50% or more ... Accessory structures, except those that include a residential dwelling unit, are exempted from these regulations. Resort Planned Unit Developments will be required to meet ...

24.5 Requirements And Procedures
A. Planned Unit Developments (1) General: As part of the preliminary development plan submittal, the applicant will be required to provide an assessment ... (b)An assessment of the vegetation coverage on the parcel and recommendations for reducing the wildfire hazard on the entire parcel, ...

Flood-Nine flood events have been documented between 1909 and 2003. Historical floods have occurred in 1909, 1927, 1929, 1951, 1965, 1971, 1973, 1983, and 1984. In anticipation of flooding, in 1984 several levees were constructed and other mitigation efforts undertaken. This preparation cost over $35,000 but prevented thousands of dollars in damage to public and private property. A flash flood in 1999 caused over $1.3 million dollars in property damage. The flood damaged or destroyed several county bridges, damaged about two miles of County Road 24, damaged several out buildings and carried away several vehicles. Flooding in this area is usually the result of cloudbursts in the steep mountains and rocky tributaries within confined basins. Six drainage basins discharge in the immediate vicinity of Ouray. The Uncompahgre River is listed as a high flood risk through much of the County including the Town of Ouray. Many tourist facilities are located along this river and could be at risk during a flood event. These cause damaging mud and debris flows. Over the years the county has made bridge and drainage improvements in areas prone to flash flooding and debris flow. The following communities participate in the **National Flood Insurance Program:** Ouray County (unincorporated areas), City of Ouray, and Town of Ridgway. The only dam is rated Class I. The dam has an emergency preparedness plan.

Landslide/Rockfall-Based on information from the emergency manager, the county experiences flood/debris flow events every year. Most are handled with local and/or state resources depending on location and severity.

History

1984	Presidential Disaster	Flooding
2002	Presidential Disaster	Wildfires
2006	USDA Disaster	Heat, High Winds, Insect Pests, Late Freeze, Ongoing Drought

Potential/Current Mitigation Projects
Local hazard, fire protection and flood mitigation plans; wildfire mitigation projects; flood mitigation and debris flow mitigation projects; public information and awareness; projects as identified in the mitigtion plan

Park County

Park County is located in the center of the state. In 2007, based on events and new information, the current Director of Emergency Management recommends changing the status of flood from medium to high hazard risk and and landslide/rockfall from low to medium risk. The three natural hazards that would most affect the county based on probability and severity are wildfire, flooding, and winterstorm. The county cuurently has Reverse 9-1-1. Park County is currently developing an FMA/PDM plan. Public information efforts include developing and distributing emergency preparedness guides, presenting at homeowners association meetings, and placing articles in the county newsletter educating residents on defensible space and FireWise. Capability has been strongly increased in the past three years by the addition of an emergency manager to the county.

Eleven Mile Reservoir State Park
Photo from Colorado State Parks website

Winterstorms-Severe winters storms are common in Park County, but residents are generally self-sufficient. Problems encountered range from closure of roadways and loss of power to possible building collapse. The rescue and sheltering of stranded travelers is a major concern during these storms. Two disasters have recently been declared due to winter storms: one in 2006 and one in 2007.

Wildland/Grassland Fire-In 2002 the Hayman Fire burned in four counties including Park. The fire consumed 137,600 total acres and resulted in 16 injuries, five deaths and 600 structures lost, including 133 homes. Suppression costs were in excess of $36 million dollars. In April 2002 the Snaking Fire in Bailey burned 2,590 acres and threatened 500 homes; 1,000 homes were evacuated with a total cost of $2.6 million. The Black Mountain fire occurred in May 2002, burning 345 acres in northeast Park County; 2,400 homes were evacuated and the total cost was $1.1 million. The Campbell Fire near Guffey occurred in July 2003 where 510 acres burned. This fire had a significant cost to Park County since it occurred on county land, totaling $486,340. In June 2000, the Hi Meadows Fire burned 11,000 acres and destroyed 58 structures. Property losses were estimated to be $5 to $10 million. Ater the wildfires of 2002 the Platte Canyon Fire District began extensive work in wildfire mitigation and have a full-time mitigation officer, a Community Wildfire Protection Plan, and have implemented recommendations, including thinning, chipping, and slash projects.

Population (2000 census):	14,523
Percent Growth from 1990:	102.4%
County Size (square miles):	2,166
County Seat:	Fairplay

Most of Park County is rangeland and the rest is mountainous, which makes it susceptible to both forest fire and range fires. An increase of new residents in the urban/wildland interface area has increased the danger from wildfire. According to the Colorado State Forest Service, in 2000 there were 20 subdivisions, totaling 400 acres, in the urban/wildland interface. Harris Park and Park County have **Community Wildfire Protection Plans.** Through the CWPP process, the Bailey area was identified as the top priority and their slash program has been very successful. Park County has received a grant from the Colorado State Forest Service to implement a county-wide slash program. The county continues to partner with the Front Range Fuels Treatment Partnership and is a member of the Coalition for the Upper South Platte.

Windstorms-The risk of straight-line winds is a common occurrence throughout the year. The impacts of strong, straight-line winds include soil erosion, blowing dust, windblown weeds, crop damage and structure damage. Associated problems include drifting ans blowing snow.

Lightning-Six lightning events have been recorded between 1994 and 2003, resulting in one death and one injury.

Drought-Park County has had multiple years of drought. 2002 was the driest year on record.

Earthquake-There are at least five faults running through Park County. Records show at least one earthquake has occurred in the County during this century.

Flood-The South Platte River, which flows throughout Park County, is considered a high risk. There are five Class I and three Class II dams located in Park County. All Class I dams have emergency preparedness plans in place. The following communities participate in the **National Flood Insurance Program**: Park County (unincorporated areas) and the Town of Fairplay.

Sinkholes-Park County south of Fairplay has one of the highest densities of sinkholes that are manifested at the surface in Colorado.

History

1995	State	Flooding
2002	Presidential Disaster	Wildfire
2002	USDA Disaster	Drought
2003	Presidential Emergency	Snow
2005	USDA Disaster	Drought, Wind, Hail, Heavy Rain
2006	USDA Disaster	Heat, High Winds, Insect Pests, Late Freeze, Ongoing Drought

Potential/Current Mitigation Projects

Local hazard mitigation plan; community wildfire protection plans; flood mitigation plans; continue preparedeness awareness; preparedness brochures; continue the slash program; continue with prescribed fires; projects as identified in the mitigation plan

Phillips County √

Phillips County is located in the northeastern region of the State and is adjacent to the Nebraska border. Phillips County participated in and is included in the **Northeastern Colorado Emergency Management Association Hazard Mitigation Plan**. Through the hazard identification and risk assessment process the county identified windstorms, winterstorms, and lightning as the highest hazard risks to the county.

Windstorms-Phillips County is subject to high non-tornadic winds as well as tornadic winds. Between 1953 and 2003, 30 tornadoes and 39 high wind events have been documented in the County. Due to the vast open space in the county, many of these tornadoes caused little or no damage.

Lightning-History show that most of the wildland/grassland fires in Colorado are caused by lightning strikes.

Winterstorms-Severe winterstorms are not only likely in northeastern Colorado, they are expected each winter. Phillips County often experiences winter storms so severe they paralyze communities and strand passing motorists. Due to the rural nature of the county, communities and individuals may become isolated at these times. Due to severe spring snowstorms in April 2001, Phillips County was one of 14 counties included in the May 2001 presidential disaster declaration. The plains counties incurred over $6 million in damages as a result of storms over two weekends. Broken power poles and downed power lines left thousands without power for days.

Wildland/Grassland Fire-According to the Colorado State Forest Service, in 1990 there was 1 subdivision, totaling 40 acres, in the urban/wildland interface area.

Flood-Five flash floods were recorded between 1997 and 2002 in Holyoke, Amherst and Haxton. The following communities participate in the **National Flood Insurance Program**: Phillips County (unincorporated areas), the City of Haxtun, and the Town of Holyoke.

History

1980/1	State	Grasshopper Infestation
1990	USDA Disaster	Drought
1995	State	Flooding
1997	Presidential Disaster	Flooding
2000	USDA Disaster	Drought
2000	USDA Disaster	Freezing Temps
2001	Presidential Disaster	Winter Storm
2002	USDA Disaster	Drought
2005	USDA Disaster	Drought, Wind, Hail, Heavy Rain
2006	USDA Disaster	Heat, High Winds, Insect Pests, Late Freeze, Ongoing Drought

Population (2000 census):	4,480
Percent Growth from 1990:	6.9%
County Size (square miles):	680
County Seat:	Holyoke

Potential/Current Mitigation Projects

Obtain Storm Ready certification; target insurance education for the uninsured flood prone properties in the county; integrate the concept of mitigation into the County Comprehensive Plan; conduct grassfire defensible space public information campaign

Pitkin County √

Population (2000 census):	14,872
Percent Growth from 1990:	17.5%
County Size (square miles):	974
County Seat:	Aspen

Pitkin County is located in the western mountainous region of the State. Pitkin County recently completed the Multi-Jurisdictional All-Hazards Pre-Disaster Mitigation Plan For Pitkin and Eagle Counties Situated Within The State of Colorado. The plan identifies fire, winter storm, and severe weather as the highest risk hazards. Pitkin County utilizes the following tools: floodplain regulations, zoning, building codes, and stormwater management. There is an emergency warning system and an evacuation plan in place. The county has a public information program and a wildfire safety program. Capabilities include GIS and mapping.

Photo by Dave Noe

Wildland/Grassland Fire- The Colorado State Forest Service reports in 1990 there were 331 subdivisions, totaling 41,536 acres in the urban/wildland interface area. The county participates in the **Emergency Fire Fund**. Conundrum Area and Starwood Area have Community Wildfire Protection Plans in progress. **Flood-**From 1995 to 2003, 12 flood events were reported. Areas near the Roaring Fork River in the Aspen vicinity are at high risk from flooding. Aspen and Snowmass Village suffered damage to roadways, bridges, recreation facilities, and public property from flooding and mudslides during the flooding of 1984. In 1997, four miles west of Snowmass a flash flood produced a mud slide which completely buried a 30 foot stretch of Highway 82 near Basalt with mud two to four feet deep. It took road crews nearly seven hours to clear the highway. In 1999, heavy rains resulted in two flash floods up to six foot deep across State Hwy 133 causing $150,000 in damages.

There are two Class I and four Class II dams located in the County. All Class I dams have an emergency preparedness plan in place.

The following communities participate in the **National Flood Insurance Program**: Pitkin County (unincorporated areas including Redstone), the City of Aspen, and the Towns of Snowmass Village and Basalt. According to the October 1, 2003 **Community Rating System Eligible Communities List,** Pitkin County is rated eight.

History

1984	Presidential Disaster	Flooding
2002	USDA Disaster	Drought
2002	Presidential Disaster	Wildfires
2006	USDA Disaster	Heat, high winds, ongoing drought

Potential/Current Mitigation Projects

Adoption of County-wide Wildfire regulations; strengthen and formalize oversight and enforcement for compliance to land use standards (H.B. 1041); develop, implement and promote subdivision wildfire protection protocols (protocols are to be targeted as an alternative to laws); implement code changes so that new developments shall have dual ingress/egress to support emergency response and evacuation; develop and implement voluntary wildfire protection programs for residents within WUI; develop and implement fuel-reduction projects; identify and improve bridges within the planning area that are inadequate for emergency response; establish Storm Ready Programs; expand radio coverage within the counties to better support the All Hazard warning/alert system (NOAA weather alert system); develop web-portal with near real-time localized weather/avalanche hazard forecast linked to the websites; update mapping of avalanche-prone areas and incorporate into GIS for public distribution; conduct or promote studies to identify critical assets and services at risk from avalanche hazards; implement warning and alert systems with specific coverage of the hazard areas; implement and publicize emergency shelters for use immediately following a landslide event; prioritize wildfire mitigation in Landslide hazard areas to improve secondary impact of Landslide following a wildfire; verify, and provide as justified, dual ingress/egress in landslide hazard areas to support emergency response and evacuation; review and implement or update as necessary Land Use Regulations relevant to Rockslide/Landslide; review and implement or update as necessary Building and Grading codes in the hazard areas; implement enhanced oversight and enforcement of HB 1041; implement 'overlay zoning' provisions to minimize development in high risk areas; establish Special planning Districts for Landslide hazard areas; develop public awareness programs to notify stakeholders in hazard areas of policies and regulations in the areas; expand use of risk assessment to guide future land use and policy formation; improve mapping in the hazard areas and incorporate results into GIS; conduct a planning session with the CGS, CDOT and Dept. of Natural Resources to identify and prioritize Landslide mitigation techniques relevant to the planning area; create or update as necessary maps useful planning and public, including landslide inventories, landslide-susceptibility maps and landslide hazard maps; review high and medium risk landslide hazard areas and evaluate and prioritize for physical mitigation systems. Specifically target mitigation actions for potential impact to St. Regis Hotel; relocate the Pan and Fork and Roaring Fork Mobile Home Parks; construct Upper Bypass Bridge Flood Control Improvements; remove Emma Bridge, construct flood mitigation improvements in sub-reach B; construct Midland Avenue Bridge flood control improvements and stabilization improvements in sub-reach; construct bio-engineering improvements in sub-reach A-C as designed by the US Army Corps of Engineers; construct sub-reach D stabilization improvements; install bio-engineering improvements in sub-reach D; implementation of an early warning / alert system on the Frying Pan River and the Crystal Valley River; review and improve as appropriate public awareness and alerting functions using media outlets, including TV Channel 17, and All Hazards Radio networks (NOAA Weather Radio); implementation of a secure, reliable early warning broadcast system in conjunction with a Storm Ready program; establish conservative metrics and guidelines to trigger evacuation of hazard prone areas; update mapping of flood-prone areas and incorporate into GIS; conduct or promote studies to identify critical assets and services at risk from seasonal flooding.

Prowers County √

Prowers County is located on the Arkansas River in the southeastern corner of Colorado, adjacent to the Kansas border. The county is primarily rural with an agriculturally based economy. Prowers County developed and is included in the **Prowers County Pre-Disaster Mitigation Plan.** Through the hazard analysis and risk assessment process, county emergency management personnel identified flood, winterstorm, drought and tornado as the hazards that pose the most risk to the county.

Flood-Floods have occurred frequently throughout Prowers County, eleven between 1995 and 2003. The Arkansas River Valley has experienced major flood events in 1921, 1951 and 1965. The 1965 flood approached the 500-year flood event classification and produced severe damage along the Valley and impacted communities from Lamar to Dodge City, Kansas. Heavy rains from a severe thunderstorm caused flash flooding. Parts of Hwy 253, south of Lamar, were closed due to high water, The following communities participate in the **National Flood Insurance Program**: Prowers County (unincorporated areas), The City of Lamar, and the Towns of Granada, Holly, and Wiley.

Winterstorms-Prowers County has experienced several winterstorms ranging in intensity from extreme cold with no moisture to a raging blizzard. Thirty-six heavy snow events were documented between 1993 and 2003. In 1997 a storm front moved across Prowers County depositing as much as 40 inches of wind-driven snow. The snow had a severe effect on structures, power lines and trees. The most significant loss was livestock and crop damage. An estimated 4, 975 head of cattle died in the County during the blizzard along with an estimated crop loss of $6.6 million.

Drought-Drought has been an all too familiar part of Prowers County history. Since the economy of Prowers County is so closely tied to Agri-business, the economic impact is considered severe.

Tornado-Between 1958 and 2003, 66 tornados and 63 high wind events were reported in the County. The geographic location of the County makes it particularly vulnerable to tornados. Occurrences have been documented in or near Wiley, Lamar, Bristol, Granada and Holly. Beyond tornadoes, Prowers County is subject to potentially destructive straight-line winds. High winds are common throughout the County, throughout the entire year.

History

1997	State	Blizzard
1999	Presidential Disaster	Flooding, Mudslides, Landslides
2001	Presidential Disaster	Winter Storms
2002	USDA Disaster	Drought
2006	USDA Disaster	Drought, Fire, Heat, High Winds
2007	SBA Administrative	Tornado

Population (2000 census):	14,483
Percent Growth from 1990:	8.5%
County Size (square miles):	1,626
County Seat:	Lamar

Potential/Current Mitigation Projects

Improved Emergency Warning Systems; update FIRM maps; guide development and use of floodplain development regulations; conduct engineering evaluation for flood proofing buildings; acquisition of flood prone properties; obtain StormReady certification; expand public knowledge about NOAA weather radio; improve water conservation practices; floodplain insurance education to local realtors and lending institutions

Pueblo County

Pueblo County is located in the southern region of the State. In a risk assessment survey conducted by the Colorado Division of Emergency Management in 2003/2004, county emergency management personnel identified winterstorms, flood, fire and hail storms as the hazards that pose the most risk to the county. Pueblo is working on an FMA/PDM plan.

Lake Pueblo Reservoir State Park
Photo from Colorado State Parks website

Winterstorm-Winterstorms can cause road closures and strand motorists (many on Highway 119). Heavy snows can bring a community to a standstill by inhibiting transportation, knocking down utility lines and by causing structural collapse. Repair, removal and rescue costs can be significant.

Flood-From 1994 to 2003, 18 flood events were reported causing one death, 7 injuries and over $54 million dollars in property and crop damage. Situated at the confluence of the Arkansas River and Fountain Creek, the City of Pueblo is especially vulnerable to flooding. In 1921, the Arkansas River flooded; 120 were killed and property damages exceeded $19 million. Flooding of Fountain Creek (1965) resulted in $3.7 million in property damage. The St. Charles River, which runs through several other small towns in the county, is considered a high risk flood area. Wildhorse, Dry Creek, Huerfano River, Salt Creek, and the Goodnight Arroyo are also at risk for flooding. The Army Corps of Engineers has assisted with mitigation projects throughout Pueblo to lessen flood risks. In addition, non-structural mitigation steps, such as zoning regulations, have been taken to lessen Pueblo's vulnerability. The county successfully competed for hazard mitigation funds for an early warning system. Flooding in 1999 caused over $32 million in property and crop damage in and around the City of Pueblo. Three Class I and three Class II dams are located in the County. All Class I dams have emergency preparedness plans in place.

The following communities participate in the **National Flood Insurance Program**: Pueblo County (unincorporated areas), the Town of Boone, and the City of Pueblo.

Wildland/Grassland Fire-The Colorado State Forest Service figures show in 1990 there were 17 subdivisions, totaling 11,520 acres, in the urban/ wildland interface area. The Mason Gulch Fire in Custer and Pueblo Counties in 2005 burned over 13,000 acres; approximately 25% were on private lands. Fuels consisted primarily of ponderosa pine and oak brush. In 1996 an area of

Population (2000 census):	141,472
Percent Growth from 1990:	15.0%
County Size (square miles):	2,401
County Seat:	Pueblo

Mountain Park burned due to ignition by downed power lines from 80 mph winds. City of Pueblo completed about 75 acres of fuels mitigation in Pueblo Mountain Park near Beulah. Work is concentrated along the eastern (developed) edge of the park adjacent to CO Hwy 78. Beulah Valley Wildfire Mitigation Council completed about 50 defensible space projects on private homes within the Beulah Valley.

The county participates in the **Emergency Fire Fund**. The Pueblo County **Community Wildfire Protection Plan** For Southwest Pueblo County, Colorado was completed in 2006. The area has an evacuation plan.

Hail-Hail produced from thunderstorms can be devastating to an agriculturally based community. One hundred and eighty-one storms occurred between 1958 and 2003. A hailstorm in 1993 caused $50 million dollars in property damage. A hailstorm in July of 2000 caused more than $16 million in damage to croplands in the county and resulted in an agricultural disaster declaration.

History

1994	Local	Flooding
1999	Presidential Disaster	Flooding
2000	USDA Disaster	Drought, Hail
2002	Presidential	Wildfires
2003	Presidential Emergency	Snow
2005	USDA Disaster	Drought, Wind, Hail, Heavy Rain
2006	USDA Disaster	Drought, Fire, Heat, High Winds

Potential/Current Mitigation Projects

Local hazard mitigation plan; community wildfire protection plans; flood mitigation plans; projects as identified in the mitigation plans; creating shaded fuel breaks along SR 165 from Rye to Lake Isabel and along SR 78 where feasible; from Highway 165 to Beulah; community cleanup days; continuing FireWise; additional protection of watersheds; additional treatments at Pueblo Mountain Park and Rye Mountain Park; work with San Isabel Electric Association to develop shaded fuel breaks; complete Red Zone survey of structures

Rio Blanco County √

Rio Blanco County is located in northwestern Colorado, roughly 250 miles west of Denver. The economy of the county is based mostly on the use and development of natural resources. Presently, the mining of coal, oil and natural gas, and the appreciation of wildlife and scenic beauty provide the foundation of economic activities within the county. Rio Blanco County participated in and is included in the **Rio Blanco County Pre-Disaster Natural Hazards Mitigation Plan**. Through the assessment process, wildfire, flooding and ice jams are identified as the hazards most frequently occurring in the county. The county has reverse 9-1-1. The county has hired a GIS person to increase capability.

Rio Blanco County North of Douglas Pass
Photo by Loyse Hinkle, Department of Natural Resources

Wildland/Grassland Fire-Rio Blanco County has some of the highest risk indexes for probability of wildfire events and the impact from those events as any county within the State of Colorado. Thirty wildland fires have been recorded between 1998 and 2003. During normal years wildfire starts are numerous in the western end of the county. According to the Colorado State Forest Service, in 1999 there were 39 subdivisions, totaling 1,229 acres, in the urban/wildland interface area. The threat is to mining and oil and gas infrastructure and some areas around Meeker. In 2002, wildfires consumed over 14, 000 acres. The county participates in the **Emergency Fire Fund**. Rio Blanco County has a Community Wildfire Protection Plan in progress.

Flood-Fifteen flood events between 1996 and 2003 have been documented, most of them in the Meeker area. Three primary forms of flooding have been recorded in Rio Blanco County. These are 1) spring thaw snowmelt, 2) monsoonal flash flood, and 3) ice jamming during extreme winter cold events. When spring arrives a snow melt begins that rapidly escalates as it warms. The resulting high water run off period can present very real flooding issues. The largest recorded flood in the county's history occurred during spring flows along the White River in 1984. The magnitude of flash flooding events in the County are significant. These events are the cause of serious erosion, property damage, and impacts to infrastructure. There are two Class I dams and three Class II dams.

The following communities participate in the **National Flood Insurance Program**: Rio Blanco County (unincorporated areas) and the Towns of Meeker and Rangely.

Population (2000 census):	5,986
Percent Growth from 1990:	-1.1%
County Size (square miles):	3,263
County Seat:	Meeker

Ice Jam-Ice jamming occurs along the White River every year and most of the time has little or no impact on property or infrastructure. The flooding that results occurs annually on portions of agricultural property.

Potential/Current Mitigation Projects
Research and develop a project with the specific goal of defining the nature of "flash flooding" and its impacts in western RBC; conduct a study to determine the extent of erosion of sediment into Kenny Reservoir and the impact to the floodway; develop erosion control projects; create a "watershed group" to develop an action plan; digitalize floodplain maps; conduct flood hazard study in Rangely; implement soil erosion mitigation activities on County Road 7; develop a comprehensive plan to address flood proofing communities; community wildfire protection plans; update hazard mitigation plan and flood plans; adopt 2006 International Fire Code

History

2002	Presidential Disaster	Wildfires
2002	USDA Disaster	Drought
2004	USDA Disaster	Drought
2006	USDA Disaster	Heat, high winds, ongoing drought
2007	USDA Disaster	Frost and freezing temperatures, drought

Rio Grande County

Rio Grande County is located on the western border of the San Luis Valley. The most heavily populated area of the county is located along the river valley and the valley floor that comprises the eastern portion of the county. Rio Grande County was in the **Project Impact Program** with five other counties from the San Luis Valley. The Valley entered the program in 2000.

Flood-There is a yearly potential for flooding in Rio Grande County that generally results from a combination of snowmelt and rainstorms. The first recorded flood occurred in 1884, with the County experiencing a total of 10 serious floods in the past hundred years. The Towns of South Fork, Del Norte, and Monte Vista, as well as many other small communities, are subject to flooding. The Town of South Fork has had two flash flooding events in 2003.

The following communities participate in the **National Flood Insurance Program**: Rio Grande County (unincorporated areas), the City of Monte Vista, and the Towns of Del Norte and South Fork. There is one Class I dam and one Class II dam located in the County. The Class I dam has an emergency preparedness plan.

Winterstorm-Winter storms occur from October to May, but residents have adapted to this danger. Storms significantly affect motorists passing through the County as they may become stranded or involved in accidents. Road closures can isolate individual residences or entire communities. Power failures are common and may complicate this situation.

Drought-Drought threatens the entire county. During these times, mountainous areas are at higher risk of wildfire and agricultural (valley) areas can suffer from livestock and crop loss.

Wildland/Grassland Fire-Approximately 50% of the County is in the wildland and forest fire danger zone. Over the past several years, many residences have been built in these areas enlarging the urban/wildland interface area. The Colorado State Forest Service reports in 1998 there were two subdivisions, totaling 400 acres, in the urban/wildland interface area. In 2002, the Million Fire began on June 19th and was officially controlled by August 1st. The fire consumed 9,346 on National Forest property. Total suppression costs were over $9 million dollars. The county participates in the **Emergency Fire Fund**.

History

1995	State	Flooding
2002	Presidential Disaster	Wildfires
2002	USDA Disaster	Drought
2006	USDA Disaster	Drought, Fire, Heat, High Winds

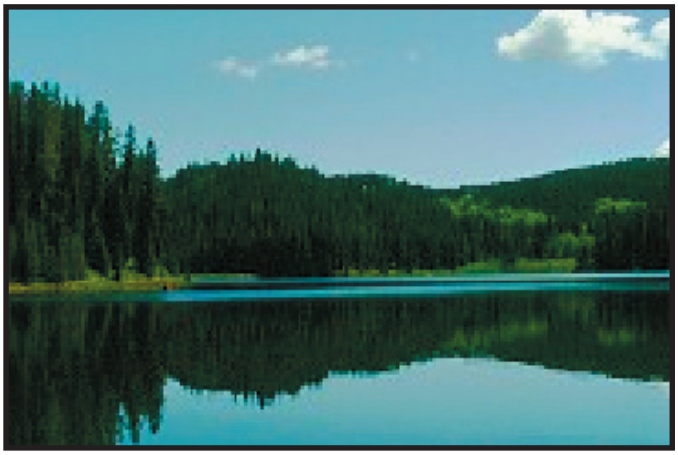
Population (2000 census):	12,413
Percent Growth from 1990:	15.3%
County Size (square miles):	916
County Seat:	Del Norte

Tornado-Between 1993 and 2003, three tornado events were reported. Although funnel clouds are sighted each year, there has been no significant damage from a tornado in the county. Fourteen hail events were recorded in the county between 1955 and 2003.

Potential/Current Mitigation Projects
Local hazard mitigation plan; flood mitigation plans; community wildfire protection plans; projects as identified in the mitigation plans

Routt County

Routt County is located in northwestern region of the State. In a risk assessment survey conducted by the Colorado Division of Emergency Management in 2003/2004, county emergency management personnel identified winterstorms and fire as the hazards that pose the most risk to the county.



Pearl Lake State Park
Photo from Colorado State Parks website

Winterstorm-Heavy snow, ice, severe winter storms and blizzards are common to northwestern Colorado causing road closures, school cancellations and power outages.

Wildland/Grassland Fire-There has been an increase in development of urban/wildland interface areas. Between 1999 and 2003, twenty-one wildland fires were recorded. Colorado State Forest Service figures report in 1999 there were 109 subdivisions, totaling 33,027 acres, in the urban/wildland interface. In the summer of 2002, the Mount Zirkel Complex was comprised of the Burn Ridge and Hinman fires. These were lightning caused fires located in the Routt National Forest/Mount Zirkel Wilderness Area. The fires consumed over 31,000 acres of timber. The cost of fighting the fire was $13.3 million dollars. The county participates in the **Emergency Fire Fund**. North Routt Fire Protection District, Fish Creek-Sanctuary, Burgess Creek, and Steamboat Pines have **Community Wildfire Protection Plans.**

The North Routt Fire Protection District community identified a WUI zone approximately 305 square miles. Inhabited areas at potential risk to wildland fire include Clark-North, Clark-South, and Seedhouse. All subdivisions that border Federal and State lands are at risk. Properties at risk include Steamboat Lake State Park, Pearl Lake State Park, Pearl Lake Subdivision, Badger Meadows, Aspen Heights, Hahn's Peak, Hahn's Peak Village, Columbine, The Ranches at Steamboat Lake, Dutch Creek, Captains Cove, Red Creek, Murphy Larson, Willow Creek/Steamboat Lake Subdivision, Moonhill, Schools (Moonhill, North Routt Charter, North Routt Preschool), public lands adjacent to private, campground facilities, Marina @ Steamboat Lake State Park, Columbine Cabins, Clark Store, Hahn's Peak Inn & Café, Vista Verde, Steamboat Lake Outfitters, Elk River Guest Ranch, Glen Eden, Elk Ridge home sites, Seedhouse Ranch, Home Ranch, High Mountain Snowmobiles, Del's Triangle, dispersed private properties with/without cabins, homes and other structures. Areas containing critical human infrastructure and values include but are not limited to: Clark North (to include CR 129, 62), Clark South (to include CR 129, 56, 54, 52),

Population (2000 census):	19,690
Percent Growth from 1990:	39.8%
County Size (square miles):	2,330
County Seat:	Steamboat Springs

Seedhouse Corridor (to include CR 64), North of the North Routt Fire Protection District (areas north of Columbine), US Forest Service Roads, Steamboat Lake Water & Sanitation District Water Treatment Plant, communication Sites (Sand Mountain, Moonhill & Farwell), and Yampa Valley Electric Substation west of Clark. The Fish Creek-Sanctuary CWPP (in Steamboat Springs) identifies 11 priorities for the community.

Flood-Several rivers and creeks in the Steamboat Springs area are listed as high flood hazard areas including the Yampa River, Soda Creek, Butcher Knife Creek, and Fish Creek. Routt County was included in the presidential disaster declaration for the flooding during 1984. Landslides and flooding caused road and bridge damage along Wolf and Oak Creeks and the Snake River. Between 1998 and 2003 there have been two flood events reported. In Hayden, floodwaters in Dry Creek washed out the approach to the Third Street Bridge. Oak Creek, flowing through the town of the same name, was transformed into a raging torrent destroying the Town's water source, sewer lines, culverts, and recreational facilities. Damages exceeded $250,000. In Steamboat Springs, a flood-fighting effort using over 10,000 sandbags protected the Town from serious flood damage. There are nine Class I and three Class II dams in the County. Three dams are located directly upstream from Steamboat Springs and several developed areas.

The following communities participate in the **National Flood Insurance Program**: Routt County (unincorporated areas), Hayden, Oak Creek, Steamboat Springs, and Yampa. According to the October 1, 2003 **Community Rating System Eligible Communities List**, the Town of Steamboat Springs is rated nine.

History

1984	Presidential	Flooding
2002	Presidential Disaster	Wildfires
2002	USDA Disaster	Drought

Potential/Current Mitigation Projects

Local hazard mitigation plan; flood and community wildfire protection plans; mechanical and prescribed fire treatments for Seedhouse; mechanical treatments at Larson 2 and at Prospector; strategic fuel breaks for HOAs; fuel reduction on CSP and DOW land; thin adjacent growth along roads for fuel breaks; Pearl Lake fuel mitigation; promote/create defensible space; FireWise projects; evaluate properties; slash disposal; ROW clearance for power lines; continue FireWise concepts education; explore becoming a FireWise community; evaluate WUI codes; forest management in residential areas; evacuation plans; dry hydrants; fuelwood removal and replanting; annual beetle tree spraying; beetle treatment and pheromone use; remove deal fuel; reduce ignitable underbrush

Saguache County

Saguache County is located in the San Luis Valley region and is surrounded by mountains. In a risk assessment survey conducted by the Colorado Division of Emergency Management in 2003/2004 and again in 2007, county emergency management personnel identified winterstorms, drought, wind, hail, and fire as the hazards that pose the most risk to the county. Saguache County was in the **Project Impact Program** with five other counties from the San Luis Valley. The Valley entered the program in the year 2000. For warning, the county utilizes an emergency preparedness network, fire sirens, and local radio stations. Public education projects include wildfire defensible space and severe weather education.

Winterstorm-Winter and spring weather may cause problems for people in the county. Residents have adapted to winter storms, but travelers often become stranded and require rescue and shelter.

Drought-Drought severely affects the agriculture base of the County. Most years, the high water table offsets a lack of precipitation, but an extended period of low precipitation could tax the water table and affect community wells, residential wells, and irrigation.

Wildland/Grassland Fire-According to the Colorado State Forest Service, in 1999 there were two subdivisions, totaling 15,100 acres, in the urban/wildland interface. In June 2006 the Coolbroth wildfire burned approximately 250 acres in the Rio Grande National Forest, 13 miles north of Del Norte in timber and grass. Significant amounts of insect and disease-killed trees contributed to rapid rates of spread.

The firefighting community of Crestone has done risk assessments and wildfire mitigation on properties in their area and Baca Grande has a **Community Wildfire Protection Plan**. Property owners are encouraged to complete fire mitigation activities. Baca Grande Volunteer Fire Department and Kundalini Fire Management have a Community Wildfire Protection Plan in progress. Baca Grande Fire Department is implementing their CWPP and recently received a fire mitigation grant from the National Park Service Community Assistance grant program. Baca Grande has a free mitigation slash pit. The Baca Grande Property Owners Association Board, on January 19, 2006, adopted a Policy and Procedure Regarding Defensible Space Plans. The county participates in the **Emergency Fire Fund**.

Windstorm/Hail-Spring and summer bring severe thunderstorms that produce flash flooding, windstorms, hail, heavy rain, and tornados. In 1991, a tornado touched down east of the town of Saguache. A hailstorm in 1994 damaged structures and destroyed crops. Damage from this storm was estimated at over $500,000. The heavy rains that can accompany these storms may cause flash flooding in several drainage. There were twenty-five hail events recorded between 1973 and 2002.

Earthquake-Saguache County is located over the Rio Grande Rift so earthquakes may occur.

Flood-The Town of Saguache recently created a flood management plan. There are no high hazard dams located in Saguache County. There is one class II dam in the county.

Population (2000 census):	5,917
Percent Growth from 1990:	28.1%
County Size (square miles):	3,144
County Seat:	Saguache

Potential/Current Mitigation Projects
Community wildfire protection plans; flood mitigation and hazard mitigation plans; wildfire fuels reduction; flood management in the Towns of Crestone and Saguache; continue slash pit in Baca Grande

History

1995	State	Flooding
2002	Presidential Disaster	Wildfires
2002	USDA Disaster	Drought
2003	Presidential Emergency	Snow
2006	USDA Disaster	Drought, Fire, Heat, High Winds

San Juan County

San Juan County is located in the southwestern region of the State. "The land is punctuated by high mountain passes and peaks with the highest mean elevation of any county in the United States" (CWPP).

Flood-The Animas River flows south near Silverton just outside the City's limits. Flooding occurs in the spring from snowmelt and in the summer and fall from severe rainstorms. Several buildings located in the Animas River floodplain have been affected by high water. Tourists, campers, and others using the back country are at risk from flooding. From 1997 to 2003, four flood events have been reported. In 1999, three flash flood events occurred in the Town of Silverton. One of the flash floods brought down a large volume of rocks and debris on U.S. Highway 550 at the southern base of Red Mountain Pass causing the highway to be closed for several hours. The following communities participate in the **National Flood Insurance Program**: San Juan County (unincorporated areas) and Silverton.

Winterstorm-Severe winter storms and avalanches are a problem throughout the County. Fifty heavy snow events have been recorded in the County between 1994 and 2004, resulting in three deaths and five injuries. Danger from avalanches increases due to the rise in use of back country areas during the winter months. Zoning regulations are in place to prevent development in avalanche zones.

Landslide-Landslides and mudslides are common occurrences in San Juan County due to the steep mountainous terrain. The potential for slides is heightened by heavy rains, snowmelt, and wildfire ravaged hillsides.

Mudslide-A 100-foot wide mudslide on July 22, 2007, caused by heavy downpours, buried railroad track 50 feet deep. The Durango & Silverton Narrow Gauge Railroad and several businesses bore economic losses from the closure.

Wildland/Grassland Fire-Colorado State Forest Service figures show as of 1999 there was 1 subdivision, totaling 185 acres, in the urban/wildland interface area. San Juan County has a **Community Wildfire Protection Plan**.

San Juan County is characterized by topographic isolation and surrounded by vast expanses of public lands. In 1999, there were 27 San Juan County residents living outside the incorporated Town of Silverton. There are about 40-50 structures in the county-mostly rustic-like homes and cabins surrounded by alpine forests (CWPP).

Type of Ownership	Number of Acres
Private	28,000
San Juan National Forest	172,000
Bureau of Land Management	49,000
State of Colorado	1,880
Total	**250,880**

The CWPP states that "... in dry summer seasons preceded by dry winters, the risk is certainly felt in the community. For example, in the late 1800's, there was a wildfire taking out many acres along Lime Creek. There was also a large fire on Ophir Pass and one one started by the train in the Animas River Valley in recent years. ..." The community fire plan goals are as follows: a) provide more public education about how to fire wise homes and properties, b) determine if there are ways to get the local Silverton/San Juan Fire Department additional equipment; c) protect the Town of Silverton's water supply on Bear Creek from a catastrophic wildfire, and d) protect important viewsheds along Highway #550 and around Silverton since tourism comprises the county's economic base. Areas identified for mitigation projects include, but are not limited to subdivisions in the lower part of the county, projects along Cascade and Lime Creeks, and Bear Creek drainage that protects Silverton's water supply.

Population (2000 census):	558
Percent Growth from 1990:	-25.1
County Size (square miles):	392
County Seat:	Silverton

History

2002	Local	Fire
2002	USDA Disaster	Drought
2002	Presidential Disaster	Wildfire

Potential/Current Mitigation Projects

Local hazard mitigation plan; community wildfire protection plans; public education for county residents on ways to fire safe their homes; better signage in the backcountry; funding for fire equipment and training; fire prevention and mitigation projects on lands identified in the Community Fire Plan including subdivisions in the lower part of the county, projects along Cascade and Lime Creeks, and Bear Creek drainage that protects Silverton's water supply; projects as identified in the mitigation plans

Jul 24, 2007 7:06 pm US/Mountain
Mudslide Shortens Trips For Durango Scenic Train

(AP) DURANGO, Colo. The Durango & Silverton Narrow Gauge Railroad suspended trips to Silverton through at least Wednesday as crews cleared a mudslide that buried a section of track in 50 feet of mud and debris. Trains were still running from Durango to Cascade Canyon. ... The 100-foot-wide slide, caused by heavy rain over the weekend, was discovered Sunday morning after two trains had left Durango for Silverton. The trains turned around about 25 miles from Durango, or 19 miles away from their destination. ...

Seid said it wasn't immediately known how the mudslide would affect the railroad's revenue.

San Miguel County √

San Miguel County is located in the southwestern region of the State. San Miguel has Emergency Alert System and Reverse 911. They are in the process of implementing a WENS notification system. The county has draft evacuation plan. The county uses Public Service Announcements (web site, radio, and newspaper) depending on the time of year and the hazard most likely to pose the biggest danger at the time. The county developed the San Miguel County, Colorado All-Hazard Mitigation Plan in 2005.

Flood-The risk of flooding is greatest in the eastern portion of the county where population growth and suburban development have altered natural drainage systems and can contribute to unpredictable flash floods during storm water runoff. Due to steep terrain, most of the county creeks and drainages are susceptible to flooding. From 1996 to 2006, 19 flood events were recorded resulting in $581,000 in property damage. In 1999 and 2001 heavy rains resulted in widespread flash flooding. The heavy rains triggered numerous mud and rock slides throughout the eastern portion of the county.

There are five Class I dams located within the county. All Class I dams have emergency preparedness plans in place.

The following communities participate in the **National Flood Insurance Program**: San Miguel County (unincorporated areas) and the Towns of Norwood and Telluride**.** According to the October 1, 2003 **Community Rating System Eligible Communities List,** the Town of Telluride is rated seven.

Wildland/Grassland Fire-There were six wildfires in 2002 and 2003. Wildfire, long considered a hazard in this area, is becoming more of a risk as more people move into urban/wildland interface areas. The Colorado State Forest Service reports in 1999 there were 12 subdivisions, totaling 5,000 acres, in the urban/wildland interface. The county completed a multi-year project that created detailed wildfire and geo hazards maps. The county has a Wildfire Safety Program where they performed wildfire danger assessments on just under 2000 structure and driveway points throughout the county. The assessments included photos of the structure and driveway and 30 questions relative to defensible space, responder safety, and address posting. Results were sent out to each homeowner with tasks to better mitigate fire on their property (where applicable) and results were also posted on the county map site to be available during response to a fire and for research purposes. The Forest Service is currently doing prescribed burns throughout the county.The county participates in the **Emergency Fire Fund**.

Land Ownership	Percent of Lands
Federal land (BLM, USFS)	60
State land	2
Private land	38
Total	**100**

Avalanche-Avalanches pose threats to back-country recreationists and some towns in San Miguel County. Much of Telluride, for example, is located in the path of historical avalanche chutes. Due to the steep mountainous terrain, high elevations, and winter snows in San Miguel County there are avalanches every winter.

Population (2000 census):	6,594
Percent Growth from 1990:	80.5%
County Size (square miles):	1,283
County Seat:	Telluride

"The San Juan Mountains that form the dramatic scenery in eastern San Miguel County are regarded as one of the most avalanche prone regions in Colorado and ranks high among avalanche prone areas on earth. ... Since 1950-2004 the County has had 10 fatalities due to avalanche, mostly to backcountry travelers ... During the spring of 2004 a snowstorm loaded the avalanche prone slopes above and around the Town of Ophir. During the course of a single day more avalanches ran than had been seen by locals in more than a decade. The avalanches snapped a power line tower, engulfed a horse barn, closed the three-mile access road to town, and trapped residents for three days. Highway 145 over Lizard Head Pass was closed for two days. (San Miguel County, Colorado All-Hazard Mitigation Plan).

Potential/Current Mitigation Projects
Continue public information; update mitigation plans; community wildfire protection plans; update structures for the wildfire safety program; prescribed burns; wildfire prevention, and preparation for wildfires; flood preparation and awareness; emergency operations center; mobile incident command vehicle; improve county addressing; education of rural living; airport mudslide mitigation; emergency evacuation plan; additional water storage for fire & drought mitigation; develop south end fire protection infrastructure; terrorism preparation; preparation for extreme winter weather; preparation for airplane crashes, rural and populated areas; incident command post at airport;; additional staff communications center; develop public officials buy-in and awareness; public education on hazards & mitigation; insect mitigation plan for wetlands to prevent vector disease; ophir road avalanche studies/control work; hire wildfire mitigation specialist; redundant radio towers; garage for emergency response vehicles; county wildfire education program, fire-wise construction; bury power lines/reinforce power lines in avalanche-prone areas; rockfall mitigation Ophir downhill; improve debris drainage systems; encourage back-country & fishing permit packages; avalanche mitigation in lizard head pass area; rockfall & mudslide mitigation norwood hill, ophir loop, keystone; surge population mitigation plan; ames penstock and dam and reinforcement; bury power lines in wildfire areas

History

1984	Presidential Disaster	Flooding
2002	Presidential Disaster	Wildfires
2002	USDA Disaster	Drought
2006	USDA Disaster	Freezes
2006	USDA Disaster	Drought, Fire, Heat, High Winds

Sedgwick County √

Population (2000 census):	2,747
Percent Growth from 1990:	2.1%
County Size (square miles):	544
County Seat:	Julesburg

Sedgwick County is located in the northeast corner of the State. Sedgwick County participated and is included in the **Northeastern Colorado Emergency Management Association Hazard Mitigation Plan**. Through the assessment process the county identified wind storms, winterstorms, flooding, drought and lightning as the highest hazard risks. History of declarations indicate that flooding and drought were the most frequent hazards generating disaster declarations. The county has added Union Pacific Railroad as a top priority in their risk assessment. There are some tornado sirens for warning.

Flood-Four flood events have been recorded between 1998 and 2002. Heavy rain, producing local flooding, occurs occasionally in this area. In 1980, Sedgwick County experienced severe rains that resulted in a state declared disaster. Most damage from this flooding was to agricultural property and related facilities. There is one Class I dam in Sedgwick County. The Town of Sedgwick participates in the **National Flood Insurance Program**.

Winterstorm-Sedgwick County is often hit by blizzards causing road closures and utility failures. Eleven heavy snow events occurred between 1993 and 2003. These storms may isolate individuals and communities and kill livestock. In 2001, the plains counties incurred over $6 million in damages as a result of winterstorms over two weekends resulting in a presidential disaster declaration. Broken power poles and downed power lines left thousands without power for days. In 2005 a building collapsed in Sedgwick due to heavy snow load.

Tornado-Tornadoes pose a significant hazard to the entire county. Twenty-nine have been documented from 1950 to 2004. An F3 tornado in 1960 caused $250,000 in property damage, two deaths, and three injuries. Damage totals for the 29 tornados include two deaths, ten injuries, and $333,000 in damages.

Hail-In 2002, hail and high winds caused 80% loss of beet crop, 75% of beans and soybeans, and twenty buildings and forty vehicles were damaged. Seventy-two hail events have been recorded in the county between 1959 and 2005. Two hailstorms have had reports of hailstones up to 4.5 inches.

Drought-Drought significantly affects Sedgwick County's communities because they are agricultural in nature. During periods of severe drought, crops and livestock suffer, as well as individual and community water supplies. During this time, the risk of grass fires increases drastically. The county emergency manager has listed droughts in 2004 and 2005 as significant disasters affecting the area.

Thunderstorm & High Wind-Seventy-four events were reported for Sedgwick County between 1958 and 2006.

Lightning-Grassland fires occur frequently throughout the area. The fires are predominantly ignited by either lightning, sparks from a breaking train, or cigarettes discarded from automobiles traversing the county roadways. Fires have grown to 16,000 acres, but losses have been minimal. Significant grass fires have occurred in 1903, 1908, 1910, 1916 and 1917.

Wildfire/Grassland Fire-According to the Colorado State Forest Service, in 1990 there were 3 subdivisions, totaling 180 acres, in the urban/wildland interface area.

History

1965	Presidential Disaster	Flooding
1969	Presidential Disaster	Flooding
1980/1	State	Grasshopper Infestation
1980	State	Flooding
1990	USDA Disaster	Drought
1999	Local	Flooding
2001	Presidential Disaster	Winter Storms
2002	USDA Disaster	Drought
2005	USDA Disaster	Ongoing Drought, Crop Diseases, Insect Infestations
2007	USDA Disaster	Drought

Potential/Current Mitigation Projects

Promote the NFIP for the community of Ovid; obtain Storm Ready certification; identify where sirens/NOAA weather repeaters are needed; improve communications systems; update mitigation plans; evacuation plans; create a multiagency task force to disseminate information; tornado and severe weather shelters

Summit County

Summit County is located in the northwest region of the State. A large portion of the economy in Summit County is based on tourism; therefore, planning for hazards is complicated by the need to address the safety of visitors. In a risk assessment survey conducted by the Colorado Division of Emergency Management in 2003/2004, county emergency management personnel identified winterstorm, windstorm and hail as hazards most threatening the Summit County area. The county is starting an FMA/PDM plan in 2007.

Winterstorm-Heavy snow, ice, severe winter storms and blizzards are common to northwestern Colorado causing road closures, school cancellations and power outages. One-hundred and thirty-five heavy snow events have been documented between 1993 and 2003. In March 2002, March 2003, and March 2004, one death occurred each year as a result of avalanche.

Windstorm-Windstorms are common and impact Summit County annually. Duration and wind speed have resulted in property damage. Thirty-three high wind events were recorded in the county between 1995 and 2003.

Hail-Hail forms during thunderstorms, and Colorado has more thunderstorm days than any other state except Florida. The State's high mountains and high elevation increase the likelihood that hail will form in a thunderstorm, making Colorado one of the hail capitals of the world.

Wildland/Grassland Fire-Wildfires are a threat, particularly during dry seasons. Much of the county is National Forest land and is used extensively for recreation. Colorado State Forest Service figures show in 1999 there were 395 subdivisions, totaling 17,166 acres, in the urban/wildland interface area. The county participates in the **Emergency Fire Fund**.

Summit County has a Summit County Wildfire Council and a **Community Wildfire Protection Plan.** Suggested mitigation activities in the plan for reducing the risk of wildfire are in these areas: The Crown-Bekkedal, Gold King, White Cloud, and Silver Queens neighborhoods; Peak 7; Gold Hill; South Blue River-Tordal Estates, Blue River Valley, and Northstar; South Fork of the Swan; and Summit Estates. 2006 implementation measures are included in the plan. Summit County has a fuels reduction program that targets high risk subdivisions and communities. A 2002 matching grant funded thinning and recycling small diameter wastes at the Climax Mine Revegetation Site.

The county has a full-time wildfire mitigation officer and has amended its building code to include fire hazard mitigation requirements for new construction and additions that increase a building's habitable footprint or number of stories. Requirements are for defensible space and fire resistive construction materials. There is a wildfire mitigation inspection process. The development code, subdivision regulations does not allow new development in areas subject to certain hazards including wilfire. The wildfire mitigation officer is also tasked with a public education program. In 2006, the BCC dedicated $270,000 for wildfire risk reduction projects.

Population (2000 census):	23,548
Percent Growth from 1990:	82.8%
County Size (square miles):	612
County Seat:	Breckenridge

Flood-A high flood risk classification is given to the Upper and Lower Blue River. Flooding could threaten Silverthorne and Breckenridge. Ten Mile Creek, also listed as a high risk, threatens the towns of Frisco and Copper Mountain.

There are five Class I dams in Summit County. All Class I dams have emergency preparedness plans in place.

The following communities participate in the **National Flood Insurance Program**: Summit County (unincorporated areas) and the Towns of Breckenridge, Frisco, and Silverthorne. According to the **Community Rating System Eligible Communities List** of October 1, 2003, The Town of Frisco was rated eight and the Town of Silverthorne was nine.

Lightning-Six injuries and one death were attributed to two lightning events in Breckenridge; one in 1997 and the other in 2004.

History

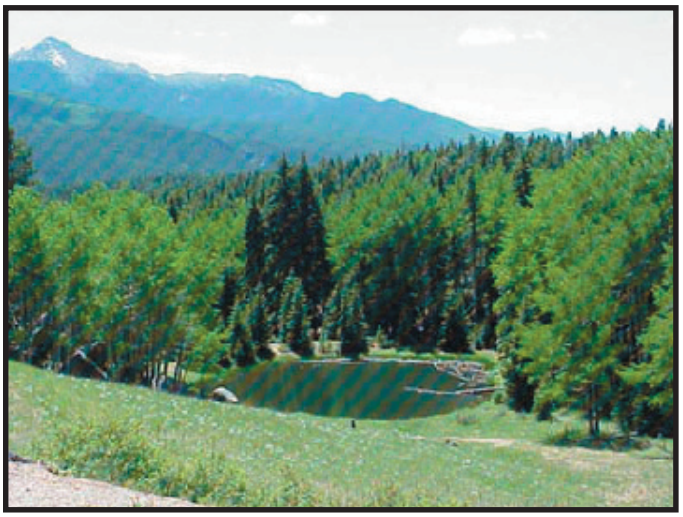
1995	State	Flooding
2002	Presidential	Wildfires
2002	USDA Disaster	Drought

Potential/Current Mitigation Projects

Local hazard mitigation plan; projects as identified in the plan; flood mitigation plans; community wildfire protection plans; projects as identified in the plans

Teller County

Teller County is located in the south central region of the State. In a risk assessment survey conducted by the Colorado Division of Emergency Management in 2003/2004, county emergency management personnel identified winterstorm and fire as hazards threatening the Teller County area. Teller County is starting (2007) an FMA/PDM plan.



Mueller State Park Photo from Colorado State Parks website

Winterstorm-Fifty-three heavy snow events occurred between 1993 and 2006. Teller County was included in the Presidential snow emergency declaration for the storms December 18-22, 2006. Winter storms increase the risk of roadway accidents and cause road closures and power failures. Often these storms are powerful enough to strand motorists necessitating search and rescue efforts.

Wildland/Grassland Fire-Wildfire occurs almost annually due to natural and human causes. A large portion of the county is heavily utilized for recreational purposes including National Forest lands and the Florissant Fossil Beds National Monument. Nearly half the county is public land. The urban/wildland interface is growing putting increasing numbers of people at risk. According to the Colorado State Forest Service, in 1999 there were 58 subdivisions, totaling 22,810 acres, in the urban/wildland interface area. From 2002 to 2003 there were three wildfire events reported resulting in 4 injuries and over $12 million dollars in property damage. The Hayman Fire, the largest wildfire in Colorado history, devastated the county; 85 homes were lost, the government lost $201,000 in property tax revenue in 2002 and 2003. Due to its mountainous location, Teller County is subject to a particularly large number of lightning strikes each year. The county participates in the **Emergency Fire Fund**.

The county is a member of the Pikes Peak Wildfire Prevention Partnership and the Coalition for the Upper South Platte Watershed and there is a Teller County Community Wildfire Mitigation Plan Commission. Teller County has a **Community Wildfire Protection Plan**. The plan has identified areas of highest priority: zone 1, an area on the east boundary of the Pike National Forest that is about 1/2 mile wide and 7 miles long and zone 2, an area contiguous with zone 1. The CWPP identifies subdivision ratings with respect to crown fire hazard and property loss hazard.

Population (2000 census):	20,555
Percent Growth from 1990:	64.9%
County Size (square miles):	554
County Seat:	Cripple Creek

The county already has about 400 acres of mitigation planned or completed on state and private land's and over 1000 acres planned on U.S.F.S. lands.

Twenty-nine subdivisions were rated highest risk for crown fire (13% of the subdivisions). Subdivisions ratest the highest crown fire hazard include: Arabian Acres, Aspen Moores, Beaver Valley Village, Billups & Barnes, Colorado Mountain Estates N&E, Cougar Canyon Estates, Crystola M&B, Green Mountain Falls, Lakeview Forest, Lost Canyon 1&2, Lost Valley Ranch, Majestic Park, Melody Acres, Morning Sun, Paradise Estates, Paradise Estates 10, Paradise Homes, Phantom Canyon, Rainbow Valley, Raspberry Mountain, Shadow Lake, Skycrest, Sunny Glen, Tranquil Acres 1-3, Trout Haven 1-5, Turkey Rock Ranch, Wildhorn & Luth. Valley, Woodrock, and Youngs Addition.

Flood-The potential for flash flooding on any of Teller County's drainages is heightened every year in the spring and summer when heavy rainfalls can rapidly escalate into dangerous floods. Ten flood events have been recorded between 1997 and 2004 in the county. Four Mile Creek has experienced flash flooding several times over the past 20 years. In 2006, Teller County experienced flooding causing damage and roads to be washed out. Some floods are occurring in the burned areas, which drastically exacerbates the situation. The following communities participate in the **National Flood Insurance Program**: Teller County (unincorporated areas) and the Town of Woodland Park.

There are four Class I and ten Class II dams located in the county. All Class I dams have emergency preparedness plans.

Earthquake- Although Teller County is considered to be at low risk for an earthquake of damaging magnitude, it is located over several faults. Near the town of Divide a 2.9 earthquake was recorded in January 1979.

History

1999	Presidential Disaster	Flooding, Mudslides, Landslides
2002	Presidential Disaster	Wildfires
2002	USDA Disaster	Drought
2003	Presidential Emergency	Snow
2005	USDA Disaster	Drought, Wind, Hail, Heavy Rain
2006	USDA Disaster	Heat, High Winds, Insect Pests, Late Freeze, Ongoing Drought
2006	Presidential Emergency	Snow

Potential/Current Mitigation Projects

Continue slash/mulch program; local hazard mitigation plan; community wildfire protection plans; projects as identified in the hazard mitigation plan; projects as identified in the CWPP and by the Commission

Washington County √

Population (2000 census):	4,926
Percent Growth from 1990:	2.4%
County Size (square miles):	2,525
County Seat:	Akron

Washington County is located in the northeastern region of the State in the high plains. Washington County participated and is included in the **Northeastern Colorado Emergency Management Association Hazard Mitigation Plan**. Washington County has primarily been subject to disaster declaration as a result of drought and flooding. To alert the public, the county utilizes Reverse 911, radio announcements, and NOAA weather radios. The National Weather Service has completed putting a NOAA radio transmitter on the Anton Tower, southwest of Anton. In 2001, Washington County was the second county to successfully receive a **Storm Ready** designation from the National Weather Service. The county has an evacuation plan. The county participates in the northeast region distribution of public information on severe weather and preparedness.

Flood-Washington County faces the threat of flash flooding because of extensive spring and summer rains. Fifteen flash floods have been recorded between 1995 and 2006. Due to drainage problems inherent in the county, water does not readily recede. The South Platte River (north of Akron), Sand Creek, Gordon Creek, and Hell Creek hold the potential for flash flooding. In August 2002, two separate thunderstorms triggered flash flooding over southeastern Washington County. Five county roads were washed out during the storm and resulted in $100,000 in property damage. The flooding occurred on State Hwy 63, north of Akron, and along County Road 57.

The following communities participate in the **National Flood Insurance Program**: the Towns of Otis and Akron. There is one Class I dam, Prewitt, located in the County. The dam has an emergency preparedness plan in place.

Drought-Washington County is primarily agricultural and drought would have a severe economic impact. Washington County is entering their 4th year of drought. 2002 was the driest year on record for Washington County and much of the State.

Tornado-Ninety-five tornados have been reported in the county between 1952 and 2005. A 1996 tornado in Elba caused over $300,000 in property damage. Four injuries and $2.5 million in damages were associated with a storm in 1967.

Thunderstorm & High Wind-One hundred and fifteen thunderstorm and high wind events were recorded between 1955 and 2006.

Wildfire/Grassland Fire-The Colorado State Forest Service reported in 1990 there was one subdivision, totaling 40 acres, in the urban/wildland interface area.

Hail-Three hundred and twenty-three hail events over 100 days were reported between 1955 and 2006. $1.2 million in crop damage were attributed to one event in 1996 southwest of Akron, affecting an area roughly 36 square miles. The storm lasted approximately two hours. Two farmsteads were wiped out and others in the area sustained serious damage. In addition, $30,000 in property damage were reported. One storm report near Arickaree in 2002 had hailstones up to 4.5 inches.

Winterstorm-Fourteen snow and ice events were reported between 1993 and 2005. Due to heavy snowfall, Washington County was included in the Presidential snow emergency declaration for the blizzard December 18-22, 2006.

Potential/Current Mitigation Projects
Obtain Storm Ready certification for communities in the county; improve emergency warning system capabilities; promote crop insurance campaigns; promote targeted flood insurance campaign in the Towns of Akron and Otis; tornado and severe weather shelters; continue public information dissemination; update mitigation plans; NOAA weather radios

History

1969	Presidential Disaster	Flooding
1980	State	Grasshopper Invasion
1981	State	Grasshopper Invasion
1990	USDA Disaster	Drought
1995	State	Flooding
1999	Local	Flooding
2000	USDA Disaster	Drought
2000	USDA Disaster	Freezing Temperatures
2001	Presidential Disaster	Winter Storms
2002	Presidential Disaster	Wildfires
2002	USDA Disaster	Drought
2005	USDA Disaster	Drought, Wind, Hail, Heavy Rain
2006	USDA Disaster	Heat, High Winds, Insect Pests, Late Freeze, Ongoing Drought
2006	Presidential Emergency	Snow

Weld County √

Weld County is in the northeast region of the State, adjacent to the Wyoming border. Weld County participated and is included in the **Northeastern Colorado Emergency Management Association Hazard Mitigation Plan**. Greeley participated in and is included in the **Northern Colorado Northern Colorado Regional Hazards Mitigation Plan**. Through the hazard identification and risk assessment process the county identified winterstorms, flooding, tornado, and drought as the highest hazard risks to the county. The Greeley emergency confirms there are no updates to the risk assessment from 2004. Weld County has a **StormReady** designation from the National Weather Service. Greeley has Reverse 911, EAS-radio, and Comcast cable override-local warning systems in place. Greeley will be updating their evacuation plan this year. Public information from Greeley is on the OEM Website and pamphlets about severe weather preparation are distributed. Greeley OEM is currently distributing NOAA weather radios to critical sites. Greeley has increased capability by putting a full time Emergency Manager into place in May 2007.

Winterstorm-Between 1993 and 2003, thirty-two heavy snow events were recorded in the County. In 2001, the plains counties incurred over $6 million in damages as a result of storms over two weekends that resulted in a presidential disaster declaration. Broken power poles and downed power lines left thousands without power for days.

Flood-Flooding has resulted in the most disaster declarations in Weld County. Between 1994 and 2004, 18 flood events were recorded. In 1997 and 1999, Weld County was included in presidential disaster declarations due to heavy rains causing widespread flooding and damaging infrastructure. Devastating effects were also felt in the floods of 1995. A 2001 flood in Greeley resulted in $600,000 in property damage.

There are nine Class I and 17 Class II dams located in the county. All Class I dams have emergency preparedness plans. The following communities participate in the **National Flood Insurance Program**: Weld County (unincorporated areas); the Towns of Ault, Dacono, Eaton, Erie, Firestone, Fort Lupton, Frederick, Hudson, Keenesburg, La Salle, Milliken, Nunn, Pierce, Platteville, and Severance; and the Cities of Evans, Greeley, and Windsor.

Tornado-Between 1950 and 2006, 220 tornados were reported sighted in the county with most occurring in rural areas. Weld County has the highest number of tornadic events in the State. Thirteen injuries were reported and $3.7 million in damages.

Drought-Weld County has had multiple years of drought. 2002 was the driest year on record for Weld County and much of the State. A continued drought would be economically devastating to this agricultural community.

Hail-The county had 512 hail events reported on 245 days between 1955 and 2006. Costs associated with these storms were $11 million in property damage and $27 million in crop damage.

Thunderstorm & High Wind-The county had 186 thunderstorm and high wind events over 126 days between 1956 and 2006. Over $500,000 in damage is attributed to these events.

Population (2000 census):	180,936
Percent Growth from 1990:	37.3%
County Size (square miles):	4,004
County Seat:	Greeley

Wildfire/Grassland Fire-Colorado State Forest Service figures show in 1990 there were 5 subdivisions, totaling 180 acres, in the interface area. Numerous grass fires occur every year in Weld County. Many reach several hundred acres and require mutual aid from neighboring fire departments – in some cases from Wyoming and Nebraska. A housing development near the Cache la Poudre River Corridor has exposed some of these structures to a threat from wildland fire. Weld County has recently completed its first Annual Wildfire Operating Plan in cooperation with the Pawnee National Grasslands, CSFS, and the Weld County Fire Chief's Association.

History

1973	Presidential Disaster	Flooding
1980	Presidential Disaster	Flooding
1982	State	Winterstorm
1986	State	Winterstorm
1990	USDA Disaster	Drought
1995	State	Flooding
1997	State	Blizzard
1997	Presidential	Flooding
1999	Presidential	Flooding, Mudslides, Landslides
2001	Presidental Disaster	Winter Storms
2002	USDA Disaster	Drought
2002	Presidential Disaster	Wildfires
2003	Presidential Emergency	Snow
2006	USDA Disaster	Drought, Fire, Heat, High Winds

Potential/Current Mitigation Projects

Promote flood insurance campaign; tornado safe room projects for building consideration; mobile home park acquisition and relocation; studies in areas in Greeley that are floodprone; NOAA weather radios and warning systems

Yuma County √

Population (2000 census):	9,841
Percent Growth from 1990:	9.9%
County Size (square miles):	2,370
County Seat:	Wray

Yuma County is located in the northeastern region of the State. Yuma County participated and is included in the **Northeastern Colorado Emergency Management Association Hazard Mitigation Plan**. Through the assessment process the county identified winterstorm, tornado, and drought as the highest hazard risks. Yuma County was the first county in Colorado to receive the **StormReady** designation from the National Weather Service. The county has done several severe weather projects over the past three years, including getting a NOAA weather transmitter. The county has also upgraded warning systems. All communities incorporated and unincorporated have sirens to warn of severe weather. The W/Y Communications Center in Yuma has reverse 911 to warn whole towns or section of the county, they also have NOAA weather radios in all the schools, hospitals, critical care facilities, and a majority of businesses and a cable TV override is also in place. Severe weather brochures both in English & Spanish have been distributed throughout the county, additionally an all-hazards brochure has been printed & distributed. Safety talks have been presented for groups as young as preschool to the elderly. Yuma County has increased capability recently by creating a new Department in the county dedicated to GIS and mapping.

Bonny Lake State Park Photo from Colorado State Parks

Winterstorm-Twenty-two heavy snow events have been recorded between 1993 and 2006. A 1995 early winterstorm caused over $5 million in crop damage. In 2001, the plains counties incurred over $6 million in damages as a result of storms over two weekends that resulted in a presidential disaster declaration. Broken power poles and downed power lines left thousands without power for days. In December 2006 the county snow totals ranged from one inch in the northwest to 13 inches in the south. This followed a storm a week and a half earlier which dropped six to 12 inches.

Tornado-Sixty-three tornados have been reported between the years 1954 and 2006; 14 injuries and $3.3 million in damage were associated with these events. Eckley and Wray utilized mitigation funds to purchase new sirens. An existing older siren was then placed in the community of Laird.

Drought-Yuma County has had multiple years of drought. 2002 was the driest year on record for Yuma County and much of the State. 2000 was also a very dry year in the region; nonirrigated crops failed due to the dry weather and lack of subsoil moisture. Continued drought is economically devastating to this agricultural community.

Hail-456 hail events over 190 days were recorded in the county between 1958 and 2006. A 1998 hailstorm in the region caused over $1 million dollars in property and crop damage.

Wildfire/Grassland Fire/Hazardous Materials Fire-Colorado State Forest Service figures show in 1990 there were 3 subdivisions, totaling 380 acres, in the interface. The county's fire risk has changed dramatically in 2007. The most notable change to the local risk assessment is the opening of a 50 million gallon per year ethanol plant just East of Yuma. Plant executives have already announced plans to expand the facility to 100 million gallons per year and, in addition, a second ethanol plant with 100 million gallons per year capacity is scheduled to start construction in 2007. Also, a local Cooperative is putting in a fuel facility with storage for up to one million gallons of diesel fuel. Thirty five Firemen from several volunteer fire departments along Highway 34 have received training in fighting ethanol fires.

Flood-A flash flood occurred in 2005 two miles south of Wray across Highway 385. Ten floods have been recorded in the county between 1950 and 2003. A 1995 flash flood around Idalia and Hale resulted in approximately $240,000 in property damage. Yuma County Road 52 and Hwy 385 both had two to five feet of water and were closed for several hours. One Class I and seven Class II dams are located in the county; the Class I has an emergency preparedness plan. The following communities participate in the **National Flood Insurance Program**: Yuma County (unincorporated areas), the City of Wray, and the Town of Yuma. A Storm water drainage project was completed in the city of Yuma.

History

1969	Presidental Disaster	Flooding
1981	State	Grasshopper Infestation
2001	Presidential Disaster	Winter Storms
2002	Presidential Disaster	Wildfires
2002	USDA Disaster	Drought
2005	USDA Disaster	Drought, Wind, Hail, Heavy Rain
2006	USDA Disaster	Heat, High Winds, Drought
2006	USDA Disaster	Hail

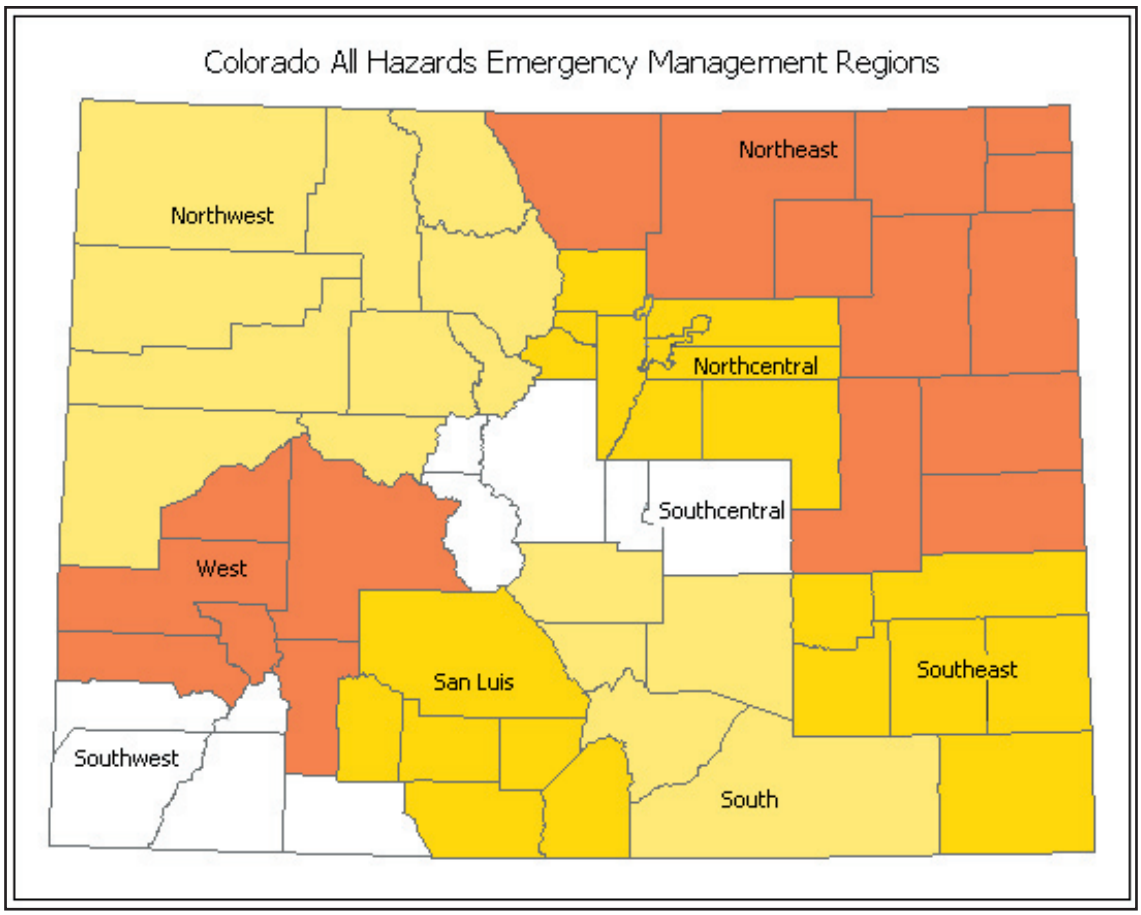
Potential/Current Mitigation Projects

Add, upgrade and replace emergency warning sirens; build tornado and severe weather shelters; relocate a fire station out of the floodplain; develop evacuation plans and other mitigation plans; continue to distribute severe weather brochures and all-hazards brochures throughout the county; continue to give Safety talks; map gas well roads; NOAA weather radios. A project is underway to provide for communications interoperability between Yuma County and the adjoining counties in Nebraska & Kansas for purposes of mutual aid and with the Bureau of Reclamation in conjunction with the Bonny Dam Emergency Action Plan.

COLORADO ALL HAZARDS EMERGENCY MANAGEMENT REGIONS

For other simultaneous planning efforts, the State of Colorado was divided into nine all hazards emergency management regions. Counties in each region are highlighted in the table and on the map below. In discussions of risk in the hazards section of the plan, responses from the 2003-4 and 2007 local emergency manager's survey are discussed by county and/or aggregated by region. Information from local hazard mitigation plans was also included in the discussions. For specific information, regarding surveys and local plan reviews, see Appendix B.

Northwest	West	Southwest	San Luis	Southcentral	South	Northcentral	Southeast	Northeast
Eagle	Delta	Montezuma	Alamosa	Lake	Fremont	Adams	Baca	Sedgwick
Summit	Montrose	La Plata	Costilla	Park	Custer	Arapahoe	Bent	Phillips
Grand	Ouray	Dolores	Conejos	Chaffee	Pueblo	Elbert	Prowers	Logan
Jackson	SanMiguel	Archuleta	RioGrande	Teller	LasAnimas	Clear Creek	Otero	Kit Carson
Routt	Hinsdale	San Juan	Mineral	El Paso	Huerfano	Broomfield	Crowley	Weld
Pitkin	Gunnison		Saguache			Jefferson	Kiowa	Larimer
Mesa						Gilpin		Yuma
Moffat						Douglas		Washington
Rio Blanco						Boulder		Lincoln
Garfield						Denver		Cheyenne
								Morgan



The tables on the next few pages are summaries of responses obtained from local emergency managers throughout the state. Responses were reviewed and averaged together by Colorado All Hazards Emergency Management Regions. Emergency managers were asked to rank risk of 13 hazards that occur in the state. The hazard most regions ranked highest is winter storms. Fire was second.

SURVEY RESULTS

The tables summarize the survey responses received from the local emergency managers in the 2003-2004 survey and the 2007 survey, as well as the completed local hazard mitigation plan reviews. High risk hazards have been identified based on probability of occurrence, potential impacts and vulnerability. Hazards are summarized in the table titled "Highest Hazard Risks by Region and Type". Additionally, the following maps summarize the results by hazard. Earthquake, landslide and rockfall, expansive soils, and subsidence were combined into geologic hazards while tornado, lightning, windstorms, and hailstorms were combined into thunderstorm hazard.

Several communities had more than one person fill out the survey. They are listed twice as separate entries, but answers were combined for the summary. Several counties did not respond to the survey and have not yet completed a local hazard mitigation plan.

HIGHEST HAZARD RISKS BY REGION AND TYPE

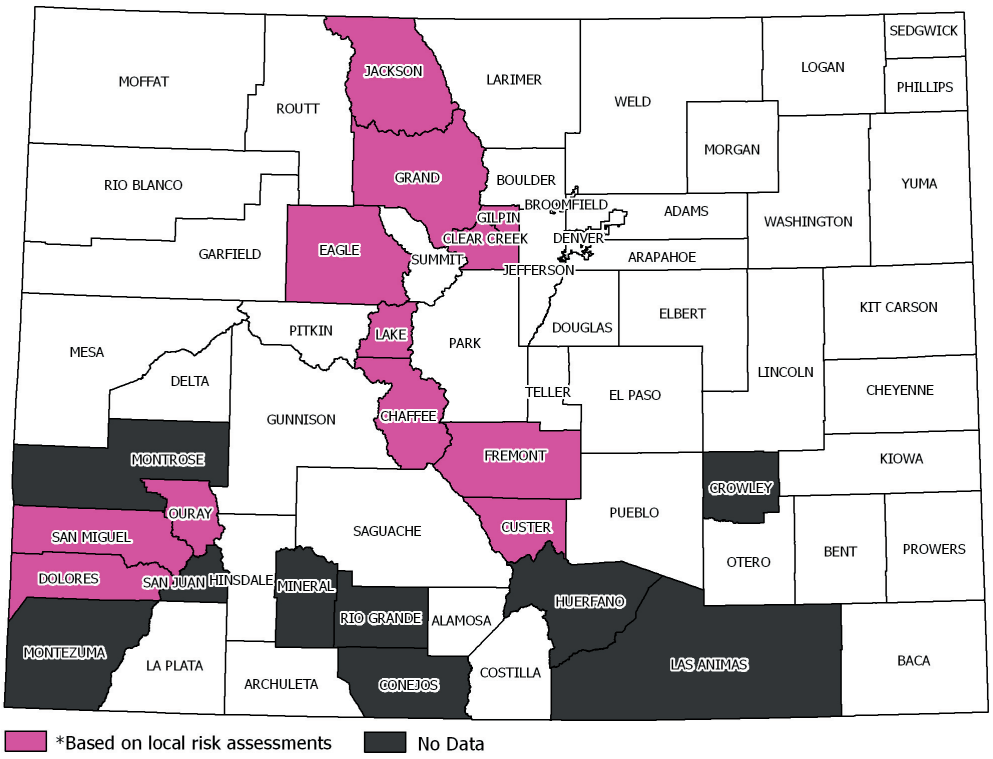
Colorado All Hazards Emergency Management Regions

	West	Southwest	Southeast	South	South Central	San Luis	Northeast	North Central	Northwest
Avalanche	x			x	x			x	x
Drought	x		x	x	x	x	x	x	
Fire	x	x	x	x	x	x	x	x	x
Flood	x	x	x	x	x		x	x	x
Geologic	x							x	x
Thunder-storm	x		x	x	x		x	x	x
Winter Storm	x	x	x	x	x	x	x	x	x
Heat	x		x	x	x		x	x	x

Note: Region deemed high risk if at least two counties in a given region have determined hazard to be high risk
Local Emergency Management Survey 2003-2004, 2007 and Hazard Mitigation Plan Review

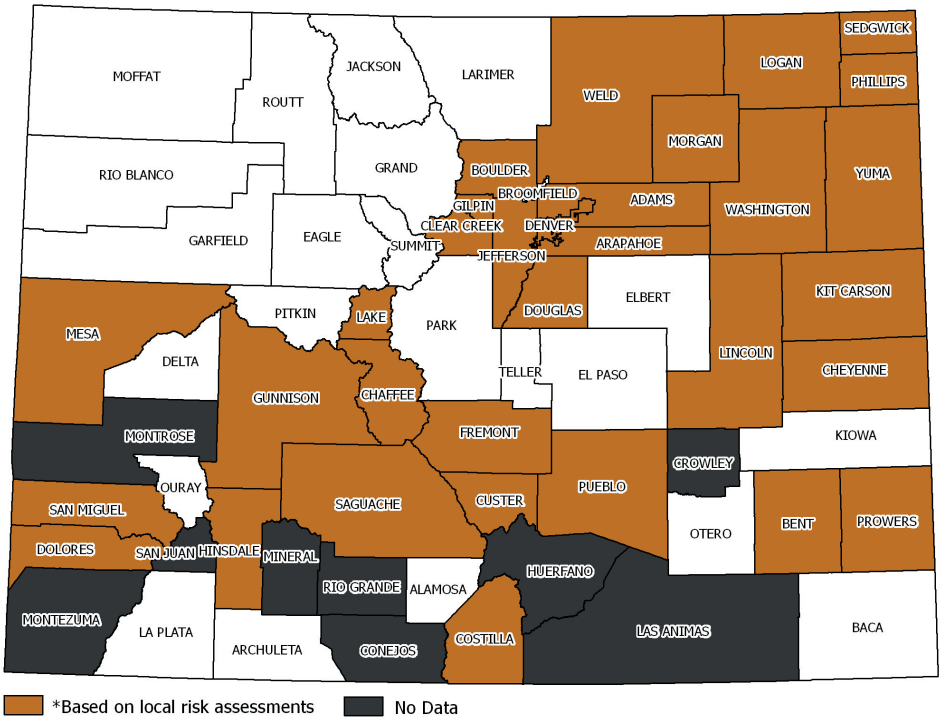
LOCAL HIGHEST HAZARD RISKS BY COUNTY BASED ON PLANS AND SURVEYS										
Eligible?	Source	County	Avalanche	Drought	Fire	Flood	Geologic	Thunderstorm	Winterstorm	Heat
y	p	Adams		x		x		x		
n	s	Alamosa			x	x			x	
y	p	Arapahoe		x		x		x		
n	s	Archuleta			x	x			x	
n	s	Baca			x			x	x	x
n	s	Bent		x		x	x	x	x	
n	p	Boulder		x		x		x	x	
n	p	Broomfield						x	x	
y	p	Chaffee	x	x	x	x		x	x	x
y	p	Cheyenne		x	x	x		x	x	x
y	p	Clear Creek	x	x	x	x	x	x	x	
n	no data	Conejos								
n	p	Costilla		x	x				x	
n	no data	Crowley								
y	p	Custer	x	x	x	x		x	x	
n	s	Delta			x	x		x	x	x
y	p	Denver		x		x		x	x	
y	p	Dolores	x	x	x	x	x		x	
y	p	Douglas		x	x	x	x	x	x	
y	p	Eagle	x		x	x	x	x	x	
Col Spgs	s	El Paso			x	x		x	x	
y	p	Elbert				x	x	x	x	x
y	p	Fremont	x	x	x	x	x	x	x	x
n	s	Garfield			x	x	x			
n	p	Gilpin	x	x	x	x		x	x	
n	s	Grand	x		x		x		x	
y	p	Gunnison		x	x	x		x	x	x
y	p	Hinsdale		x	x		x	x	x	
n	no data	Huerfano								
n	s	Jackson	x		x		x		x	
y	p	Jefferson		x	x	x	x	x	x	x
n	s	Kiowa			x			x	x	
y	p	Kit Carson		x	x			x	x	x
n	s	La Plata							x	
y	p	Lake	x	x	x	x		x	x	x
y	p	Larimer		x	x	x	x	x	x	
n	no data	Las Animas								
y	p	Lincoln		x	x			x	x	x
y	p	Logan		x				x	x	x
y	p	Mesa		x	x	x				x
n	no data	Mineral								
n	s	Moffat							x	
n	no data	Montezuma								
n	no data	Montrose								
y	p	Morgan		x		x		x	x	
n	s	Otero			x			x	x	x
n	s	Ouray	x		x	x	x		x	
n	s	Park			x	x			x	
y	p	Phillips		x		x		x	x	x
y	p	Pitkin			x			x	x	
y	p	Prowers		x	x	x		x	x	
n	s	Pueblo		x	x	x		x		x
y	p	Rio Blanco			x	x	x	x	x	x
n	no data	Rio Grande								
n	s	Routt			x				x	
n	s	Saguache		x	x			x	x	
n	no data	San Juan								
y	p	San Miguel	x	x	x	x	x	x	x	x
y	p	Sedgwick		x	x			x	x	x
n	s	Summit						x	x	
n	s	Teller			x				x	
y	p	Washington		x				x	x	x
y	p	Weld		x				x	x	
y	p	Yuma		x				x	x	
SOURCE: p = plan, s = survey Local Emergency Management Survey 2003-2004, 2007 and Hazard Mitigation Plan Review										

Avalanche: High Risk Counties



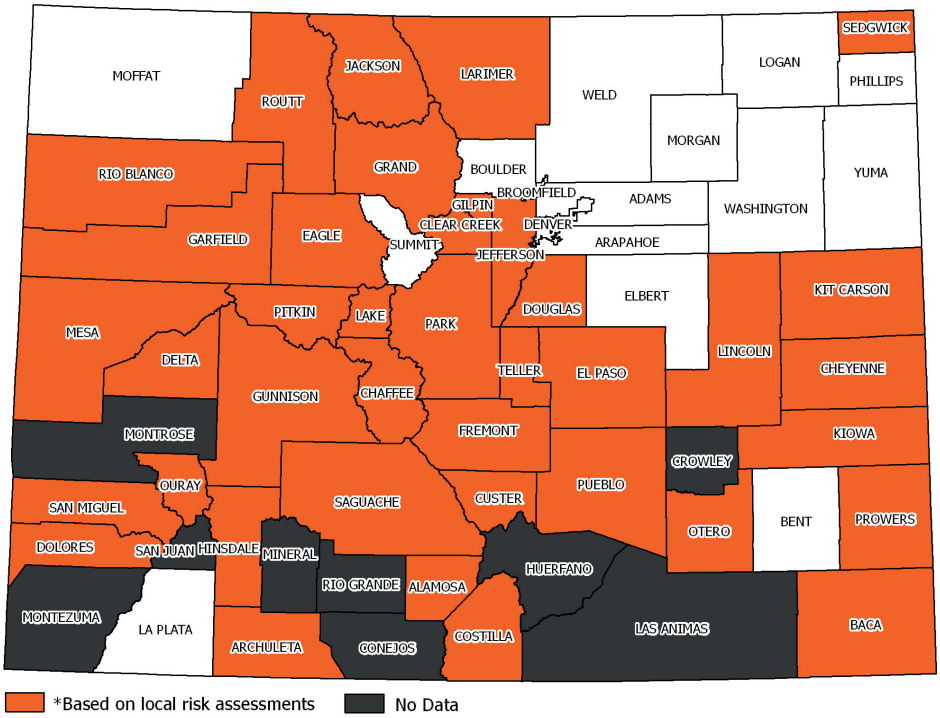
High Risk Counties With Expected Growth from 2000 to 2020: Chaffee (42%), Clear Creek (36%), Custer (85%), Dolores (27%), Eagle (77%), Fremont (35%), Gilpin (38%), Grand (80%), Jackson (13%), Lake (78%), Ouray (80%), San Miguel (66%). -State Demography Office

Drought: High Risk Counties



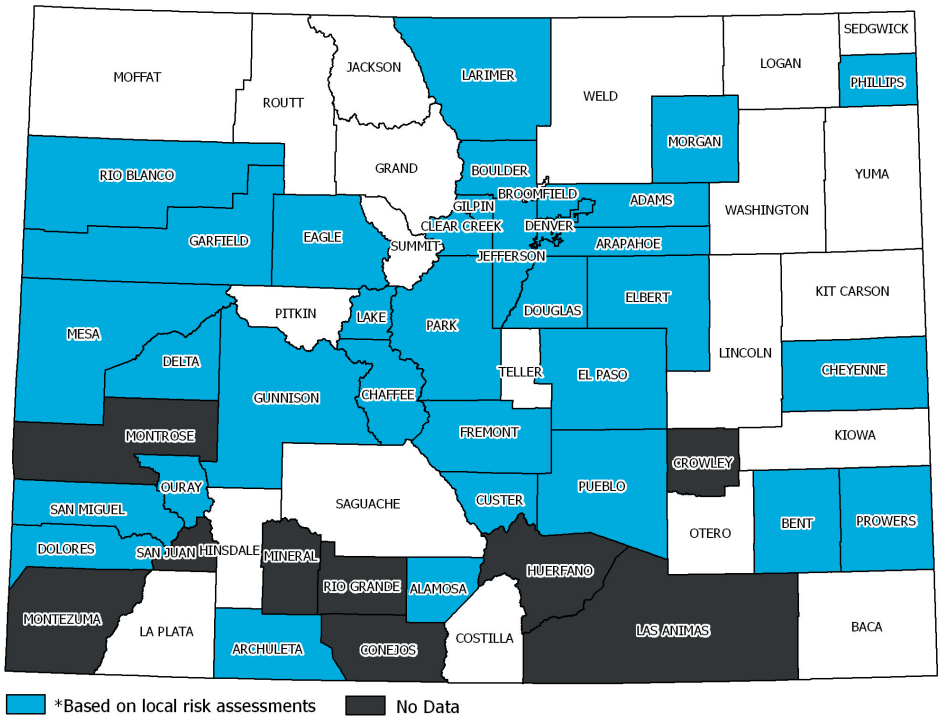
High Risk Counties With Expected Growth from 2000 to 2020: Adams (53%), Arapahoe (40%), Boulder (18%), Chaffee (42%), Cheyenne (-1), Clear Creek (36%), Costilla (15%), Custer (85%), Denver (16%), Dolores (27%), Douglas (136%), Fremont (35%), Gilpin (38%), Gunnison (28%); Hinsdale (37%), Jefferson (15%), Kit Carson (9%), Lake (78%), Lincoln (10%), Logan (39%), Mesa (57%), Morgan (46%), Phillips (13%), Prowers (9%), Pueblo (36%), Saguache (36%), San Miguel (66%), Sedgwick (10%), Washington (5%), Weld (99%), Yuma (14%). -State Demography Office

Fire: High Risk Counties



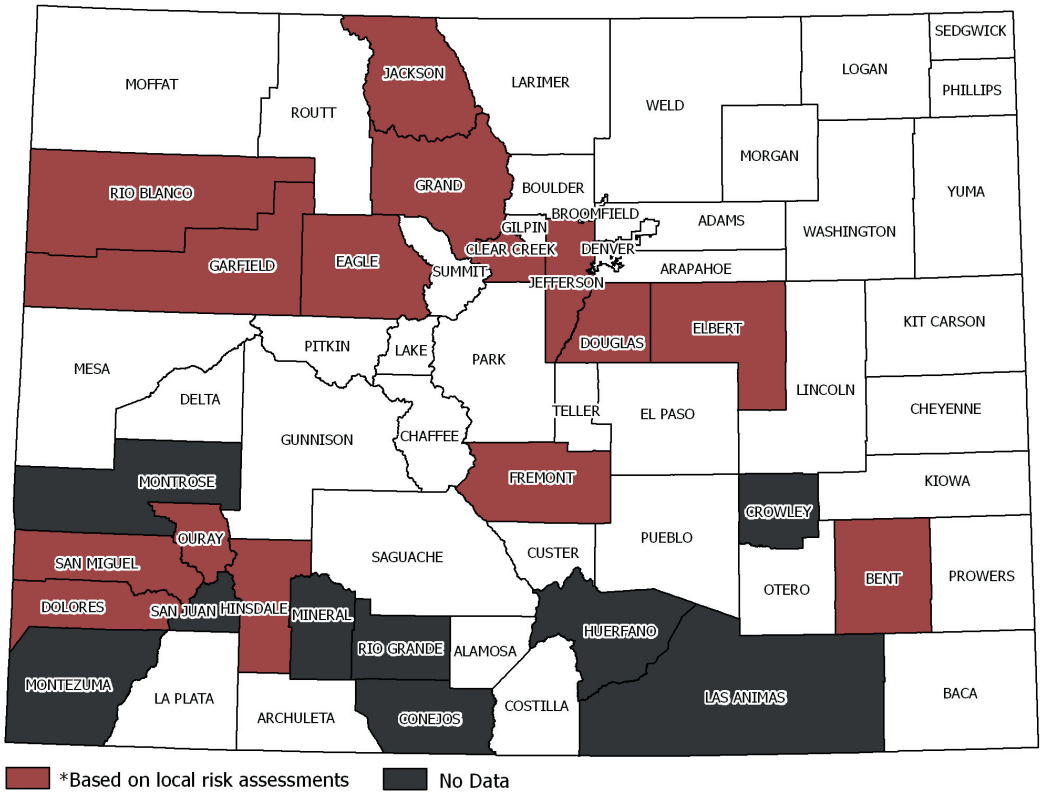
High Risk Counties With Expected Growth from 2000 to 2020:
Alamosa (32%), Archuleta (97%), Baca (-9%), Chaffee (42%), Cheyenne (-1), Clear Creek (36%), Costilla (15%), Custer (85%), Delta (66%), Dolores (27%), Douglas (136%), Eagle (77%), Fremont (35%), Garfield (124%), Gilpin (38%), Grand (80%), Gunnison (28%); Hinsdale (37%), Jackson (13%), Jefferson (15%), Kiowa (-5%), Kit Carson (9%), Lake (78%), Larimer (46%), Lincoln (10%), Mesa (57%), Otero (9%), Ouray (80%), Pitkin (47%), Prowers (9%), Pueblo (36%), Rio Blanco (27%), Routt (61%), Saguache (36%), San Miguel (66%), Sedgwick (10%).
-State Demography Office

Flood: High Risk Counties



High Risk Counties With Expected Growth from 2000 to 2020:
Adams (53%), Alamosa (32%), Arapahoe (40%), Archuleta (97%), Bent (15%), Boulder (18%), Chaffee (42%), Cheyenne (-1), Clear Creek (36%), Custer (85%), Delta (66%), Denver (16%), Dolores (27%), Douglas (136%), Eagle (77%), El Paso (48%), Elbert (112%), Fremont (35%), Garfield (124%), Gilpin (38%), Gunnison (28%); Jefferson (15%), Lake (78%), Larimer (46%), Mesa (57%), Morgan (46%), Ouray (80%), Park (156%), Phillips (13%), Prowers (9%), Pueblo (36%), Rio Blanco (27%), San Miguel (66%).
-State Demography Office

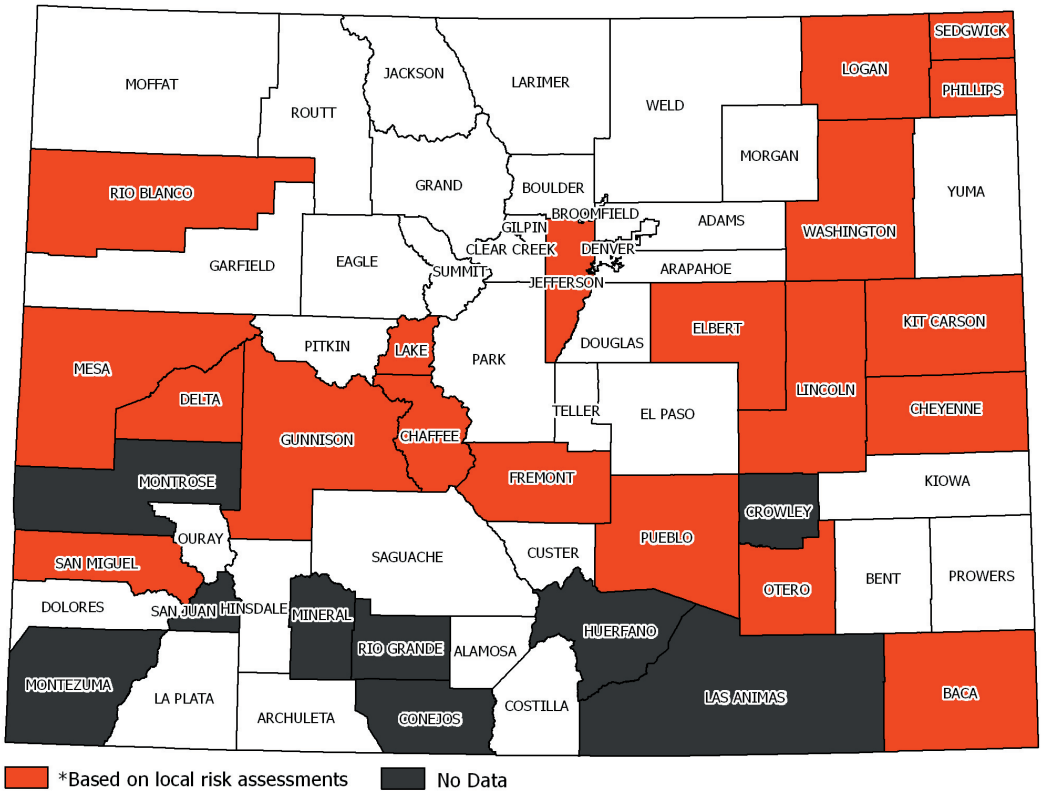
Geologic: High Risk Counties



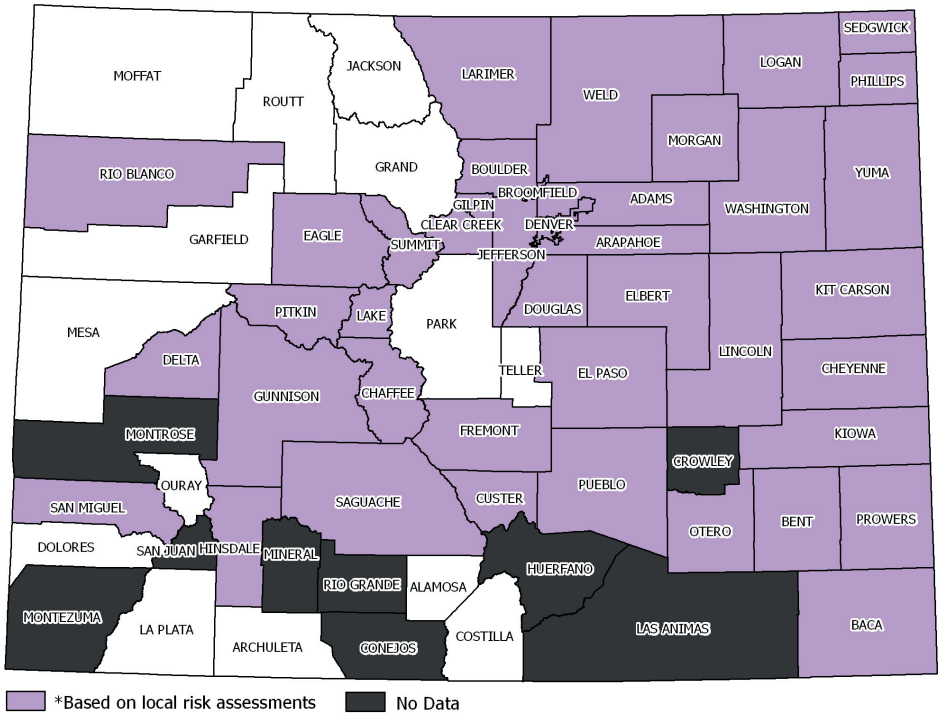
High Risk Counties With Expected Growth from 2000 to 2020: Bent (15%), Clear Creek (36%), Dolores (27%), Douglas (136%), Eagle (77%), Elbert (112%), Fremont (35%), Garfield (124%), Grand (80%), Hinsdale (37%), Jackson (13%), Jefferson (15%), Ouray (80%), Rio Blanco (27%), San Miguel (66%). -State Demography Office

Extreme Heat: High Risk Counties

High Risk Counties Expecting Growth from 2000 to 2020: Baca (-9%), Chaffee (42%), Cheyenne (-1), Delta (66%), Elbert (112%), Fremont (35%), Gunnison (28%); Jefferson (15%), Kit Carson (9%), Lake (78%), Lincoln (10%), Logan (39%), Mesa (57%), Otero (9%), Phillips (13%), Pueblo (36%), Rio Blanco (27%), San Miguel (66%), Sedgwick (10%), Washington (5%). -State Demography Office



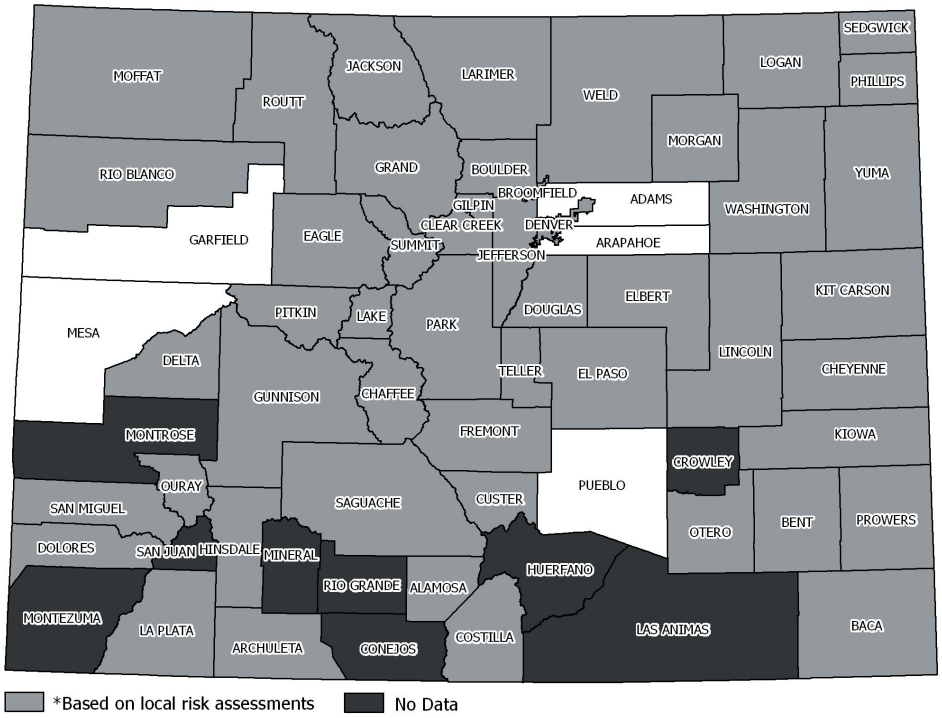
Thunderstorm: High Risk Counties



High Risk Counties With Expected Growth from 2000 to 2020: Adams (53%), Arapahoe (40%), Baca (-9%), Bent (15%), Boulder (18%), Chaffee (42%), Cheyenne (-1), Clear Creek (36%), Custer (85%), Delta (66%), Denver (16%), Douglas (136%), Eagle (77%), El Paso (48%), Elbert (112%), Fremont (35%), Gilpin (38%), Gunnison (28%); Hinsdale (37%), Jefferson (15%), Kit Carson (9%), Kiowa (-5%), Lake (78%), Larimer (46%), Lincoln (10%), Logan (39%), Morgan (46%), Otero (9%), Phillips (13%), Prowers (9%), Pueblo (36%), Rio Blanco (27%), Saguache (36%), San Miguel (66%), Sedgwick (10%), Summit (74%), Washington (5%), Weld (99%), Yuma (14%).
-State Demography Office

High Risk Counties Expecting Growth from 2000 to 2020: Alamosa (32%), Archuleta (97%), Baca (-9%), Bent (15%), Boulder (18%), Chaffee (42%), Cheyenne (-1), Clear Creek (36%), Costilla (15%), Custer (85%), Delta (66%), Denver (16%), Dolores (27%), Douglas (136%), Eagle (77%), El Paso (48%), Elbert (112%), Fremont (35%), Gilpin (38%), Grand (80%), Gunnison (28%); Hinsdale (37%), Jackson (13%), Jefferson (15%), Kiowa (-5%), Kit Carson (9%), Kiowa (-5%), La Plata (56%), Lake (78%), Larimer (46%), Lincoln (10%), Logan (39%), Moffat (34%), Morgan (46%), Otero (9%), Ouray (80%), Park (156%), Phillips (13%), Pitkin (47%), Prowers (9%), Rio Blanco (27%), Routt (61%), Saguache (36%), San Miguel (15%) Sedgwick (10%), Summit (74%), Teller (50%), Washington (5%), Weld (99%), Yuma (14%).
-State Demography Office

Winterstorm: High Risk Counties



LOCAL/REGIONAL ORGANIZATIONS AND PROGRAMS

Urban Drainage and Flood Control District (UDFCD)
Forty counties, cities and towns are served by the UDFCD. The Programs include the following: Design, Construction, and Maintenance; Floodplain Management; Information Services and Flood Warning; Master Planning; and South Platte River. The Design and Construction Program is responsible for the design and construction of master planned projects. Since 1981 the Maintenance Program has been assisting governments in the area with drainageway maintenance activities. The Floodplain Management Program was established in 1974 to prevent new flood damage potential from being introduced into the 100-year floodplains while encouraging the utilization of non-structural methods of flood damage mitigation. The major activities of the program are: (1) The National Flood Insurance Program (NFIP), (2) Floodplain regulation, (3) Flood hazard area delineation, (4) Development reviews, (5) Maintenance eligibility, (6) Master plan implementation and (7) Public information. The Information Services and Flood Warning program was established in January 2005 to consolidate and enhance the District's information services and flood warning capabilities. The flood warning program has served District local governments since 1979 and was previously an activity of the Floodplain Management Program. The District assists governments in developing flood warning plans and installing and maintaining automated flood detection networks. In addition, the District hires a private meteorological service to provide daily forecasts of flood potential and to notify District local governments when threatening conditions develop. Daily forecasts and real-time data from the flood detection networks are available from the District's website. A major new activity will be to develop, operate and maintain Geographic Information Systems (GIS) in support of a variety of District activities including; Digital Flood Insurance Rate Map (DFIRM) production and maintenance, tracking projects for maintenance eligibility, design and construction projects, routine and restorative maintenance projects, flood threat evaluation, data sharing, regional mapping initiatives, and other applications. Master planning has evolved into five major areas of interest: (1) Major drainageway master planning; (2) Outfall systems planning; (3) Drainage criteria manuals for local governments and the District; (4) Support of local government stormwater NPDES discharge permitting efforts; and (5) Special projects, such as developing criteria and technical information for stormwater quality and quantity best management practices, benefit-cost analysis, wetland issues, software development and other projects that contribute to the advancement of regional stormwater technology. The South Platte River Program began in 1987; it was established in order to provide special attention to the South Platte River, the receiving body of water for all drainageways in the District.

County members are Adams, Arapahoe, Boulder, Broomfield City/County, Denver City/County, Douglas, and Jefferson. City and town members are Arvada, Aurora, Boulder, Bow Mar, Brighton, Centennial, Cherry Hills Village, Columbine Valley, Commerce City, Edgewater, Englewood, Erie, Federal Heights, Foxfield, Glendale, Golden, Greenwood Village, Lafayette, Lakeside, Lakewood, Littleton, Lonetree, Louisville, Morrison, Mountain View, Northglenn, Parker, Sheridan, Superior, Thornton, Watkins, Westminister, and Wheatridge. This is an exceptionally successful program for many reasons, including the following: Communities and the District cost share on projects; Flood mitigation and planning do not correspond to political boundaries; master planning is required; expertise is centralized and available to members; projects are well coordinated; there is follow-up with maintenance projects.

Northern Colorado Bark Beetle Cooperative
The Cooperative is an interagency initiative created because the forests of northern Colorado are dying by bark beetle epidemics. The purpose of the cooperative is to develop a comprehensive program to address ongoing and projected forest mortality and resulting impacts. Cooperators include: the Northwest Colorado Council of Governments (with a combined membership of forty county and municipal governments); Eagle, Grand, Jackson, Routt, and Summit Counties; local communities; conservation districts; private landowners; Colorado State Forest Service; Bureau of Land Management (Kremmling and Gloenwood Springs Field Offices); and the U.S. Forest Service (Arapaho-Roosevelt, White River and Medicine Bow-Routt NFs, and the Rocky Mountain Research Station). The Northern Colorado Bark Beetle Cooperative Final Assessment Strategy, done in 2005, may be found at http://www.fs.fed.us/r2/fhm/bbcoop/final_strategy_assessment.pdf. The Strategy identified values at risk, including communtieis facing increased wildfire threat, watersheds suffering damage to soils and increased sediment in streams from potentially severe wildfires, lost habitat, and transmission lines that could be lost or damaged from wildfire. It also identified both long-term and short-term goals and projects being completed by cooperative agencies. This is a very successful cooperative, in that it crosses boundaries and political lines to solve a common and critical problem.

Front Range Fuels Treatment Partnership (FRFTP)
The FRFTP is a successful alliance of local governments, private landowners, conservation organizations, state government, and federal government agencies, academia, industry leaders, and other stakeholders dedicated to foreset restoration and fire risk mitigation. The FRFTP has conducted extensive public involvement including a series of communities meetings in 2005-6 and has collaborated in identifying and supporting specific project areas and types of treatments. Partnership information may be found at www.frftp.org. Participants include Boulder County Land Use Department, Jefferson County Open Space, Grand County, Colorado Springs Utilities, Colorado Timber Industry Association, Denver Water, State Farm Insurance, Rocky Mountain Insurance Information Association, Colorado Counties, Inc., County Sheriffs of Colorado,

Colorado Fire Chiefs Association, The Wilderness Society, The Nature Conservancy, Coalition for the Upper South Platte, Southern Rockies Conservation Alliance, Upper South Platte Watershed Association, National Forest Foundation, National Park Service, U.S. Forest Service, U.S. Fish and Wildlife, U.S. Geological Survey, Bureau of Land Management, Natural Resources Conservation Service, Colorado State Forest Service, Colorado State Parks, Colorado Air Pollution Control Division, Colorado Division of Emergency Management, Trust for the Public Land, Great Outdoors Colorado, Colorado State University, Center of the American West, and the University of Colorado. The FRFTP continues on with its successful efforts to coordinate and implement.

MetroVision

As a regional planning organization, the Denver Regional Council Of Governments (DRCOG) has the statutory responsibility to prepare and adopt a regional plan. This plan provides policies to guide where, how much and when growth and development occur in the region. Since its creation, DRCOG has developed and maintained a regional plan, and it is now known as Metro Vision. Metro Vision is the foundation of all of the regional council's long-range planning activities, establishing the need and demand for regional facilities and services. DRCOG was also the entity that completed the local hazard mitigation plan, focusing on the region's natural hazards.

Metro Vision 2030 is the Denver region's plan for future growth and development. It was adopted by the DRCOG Board of Directors in January 2005 with the year 2030 as its planning goal. It is through the Mile High Compact that Metro Vision is implemented. Efforts are now underway to update Metro Vision and extend its planning period to the year 2035.

Metro Vision is a single, comprehensive guide for regional planning that integrates previously separate plans for growth, development, transportation, and water quality management; outlines strategies to help the region preserve its quality of life while also positioning it to benefit from growth; recognizes that today's issues cross community lines and each community's actions affect the region as a whole; gives each community an opportunity to make its own decisions within a larger framework of regional principles; and is designed to preserve the community differences and flexibility that give the region its vitality and character. DRCOG has produced "Measuring Progress: Regional Performance Measures and Indicators." The report represents the first attempt to gauge progess on Metro Vision. It measures achievements on the major principles of the Metro Vision plan, along with some assessments for the region's overall quality of life. According to the report, "of the 23 indicators, 17 show positive or stable trends. In a seven-year period, a 74 percent positive or neutral composite bodes well for the future implementation of MetroVision and its goals."

Pikes Peak Wildfire Prevention Partners (PPWPP)

The PPWPP is a not-for-profit interagency task force committed to the prevention and mitigation of wildland fires. The mission of the Pikes Peak Wildfire Prevention Partners is to provide effective reduction of the threat of wildfire to life and property in El Paso, Teller and Douglas counties. This mission is being accomplished through the effective and efficient education, cooperation and coordination of available resources by individuals, agencies and organizations. The PPWPP are celebrating their tenth anniversary, demonstrating lasting ability and success. The Partners include: Colorado State Forest Service, USDA Forest Service, El Paso County OEM's and Fire Districts, Douglas County OEM's and Fire Districts, Douglas County, El Paso County, Teller OEM´s and fire protection districts, United States Air Force Academy, Ruth Ann Steele, Horticare, State Farm Insurance, Colorado Springs Fire Department, BLM, National Park Service, Florissant Fossil Beds, Colorado Forestry Association, Nature Conservancy, Wildfire Prevention Group, Inc., Homeowner associations, Individual homeowners and volunteers, Jim and Marion Taylor and Ella Johnson.

Coalition for the Upper South Platte (CUSP)

The CUSP, in cooperation with its federal, state, local government, environmental organizations, business community, and individual partners, has worked to improve the water quality and ecological health of the watershed through a variety of projects, including forest restoration, fire rehabilitation, river/riparian restoration, environmental education, monitoring, and obtaining conservation easements on critical lands. Under Colorado's "Unified Assessment" this watershed is considered a priority need for restoration due to the growth in population in both the Front Range and intermountain areas. A coalition of stakeholders, including local governments, federal and state agencies, businesses, water providers and individuals within the watershed have banded together to protect the water quality and ecologic health of the Upper South Platte Watershed through the cooperative efforts of watershed stakeholders, with emphasis on community values and economic sustainability. A 1999 EPA grant made possible a Data Inventory and Assessment (DIA) which was designed to: 1) Identify and document available data and responsible entities related to watershed land use activities, water quality, environmental quality and Geographic Information System (GIS) information. 2) Identify and rank existing and potential sources that can affect water quality and ecological health within the watershed. 3) Assess water quality and stream health within the watershed. 4) Prioritize areas for potential protection and restoration activity and areas requiring further study.

The DIA became the backbone of a yearlong planning process. Partners identified and prioritized 15 issues (agriculture, fire, land use and development, mining, natural sources, recreation, solid/hazardous waste, storm water runoff, transportation, underground storage tanks, water

rights, water system operations, wastewater treatment plants and septic systems, and weeds) that impact, or have the potential to impact the watershed. Through the planning process, the partners then identified and began implementing projects that would begin to address these issues. Currently the U. S. Forest Service (the management agency of most of the public lands in the watershed) has increased its participation through the national large-scale watershed Upper South Platte Restoration Project. This project is designed to return the montane forest within the watershed to its historic nature through vegetative management, with the goal of reducing the likelihood of catastrophic fire. Due to the current unnatural fuel loads and poor forest health, catastrophic fire has become the most critical issue in the watershed, as evidenced by the 2002 Hayman Fire, the largest in Colorado history, burning over 137,000 acres, much of it at extremely high intensity that will have ecologic impacts for decades to come.

The Firewise Council of Southwest Colorado

The Firewise Council of Southwest Colorado seeks to keep homes, properties and lives from being damaged by wildfire. It does so through neighborhood-based, citizen-driven approaches including overseeing a Neighborhood Ambassador program, completing pubic education projects, encouraging and facilitating homeowners to undertake mitigation, and changing the public will so as to improve community safety. The Firewise Council is grassroots and collaboratively involves a wide variety of partners: Homeowner Associations, Subdivisions, High Risk Roads, and Neighborhoods (as of 3/07)-La Plata County: Aspen Trails, Buena Vista Ranch, Celedon II, Cherry Gulch Road, Columbine, CR 203 (near Trimble), Deer Valley Estates, Durango Hills, Durango Ridge Ranch, Edgemont Ranch, Enchanted Forest, Falls Creek Ranch, Forest Lakes, Los Ranchitos, Mesa Vista, Palo Verde, Rafter J (part), Shenandoah, Trapper's Crossing, Tripp Creek, Vista de Oro, and Wilderness Lake Mountain HOA. Montezuma County: Cedar Mesa Ranches, Indian Camp Ranch, and Elk Stream Ranch; and Archuleta County: Aspen Springs and Wildflower. Government–San Juan National Forest/Bureau of Land Management, Colorado State Forest Service, and local fire departments and districts. Non-profit organizations and educational institutions– San Juan Mountains Association, Southwest Conservation Corps, and the Fort Lewis College-Office of Community Services. Private businesses and additional networks–wildfire mitigation companies, realtors, architects and insurance agents, and the La Plata Electric Association. Activities include overseeing and running a Neighborhood Ambassador Program; assisting with development of the La Plata County Community Wildfire Protection Plan (CWPP); keeping an extensive email tree to educate and mobilize; acting as a collaborative Council and holding bi-monthly meetings; distributing a five-part brochure series throughout the region on key wildfire topics; providing information via Web site access at **www.southwestcoloradofires.org**; organizing regular educational programs including outreach to homeowner associations; participating in the annual April Wildfire Prevention and Education Month; staffing educational booths at home and garden shows, etc.; distributing relevant materials to realtors, architects and other stakeholder groups; writing public education articles for submission to newspapers and magazines; finding ways to increase mitigation opportunities for property owners; working with the fire fighting entities to speak to community groups about wildfire safety; catalyzing regional collaboration and action with other counties; and Advocating for policies that improve community safety.

Front Range Fuels Treatment Partnership: Larimer County Coordinating Group

The mission of the coordinating group is to provide leadership and coordination of hazardous fuels reduction treatments in Larimer County. The role of the coordinating group is to: complete and update the county-wide landscape-level fuels assessment utilizing the best available scientific tools that will evaluate hazards, values, and risks; utilize the fuels assessment findings to prioritize, design, and locate effective fuel treatments in a cohesive strategy; invest in projects that seek to protect communities and watershed values; coordinate and support on-going NEPA efforts by federal agencies; and support work on lands other than federal lands; coordinate and support FireWise efforts with local communities to prepare Community Wildfire Protection Plans (CWPP's); to the greatest extent possible, support on-the-ground efforts by sharing resources and expertise; and overcome financial barriers to collaborative efforts. This follow up group and these activities demonstrate the effectiveness of the FRFTP.

SUCCESS STORIES/PROGRAMS/EFFECTIVENESS

Cheyenne County
The NOAA weather radio project has been a big outreach project for this office. The fact that sirens don't always reach the public, NOAA radios have been distributed as we are able. Also the 72 hour kits have been distributed, and encouraged, along with extensive training in this area.

Eagle County
The Eby Creek subdivision near Eagle completed a wildfire fuel reduction project which included a shaded fuel break created by the BLM adjacent to the subdivision along with tree thinning and prescribe fire conducted by county agencies on Eby Creek open space property within the subdivision and defensible space management for 18 private properties within the subdivision.

El Paso County
The Black Forest Slash Mulch Program was started at the grass roots by a group of citizens concerned about the condition of the wild-land-urban interface. It is supported by the Solid Waste Department of the county, but it is run entirely by volunteers, including controlling flow into and out of the site, supervising to ensure citizen safety, arranging for contractors to do the mulching, etc. There is no charge to residents who bring their slash to the site; they are asked to donate non-perishable canned goods, however, which go to the regional food bank called Care & Share. Residents can then take away for landscaping entire ;pick-up truck loads of mulch. (There is a $4.00 fee for use of a loader to make it easier.) This also serves as a partnership for support of feeding of evacuees when shelters are opened. The Slash-Mulch volunteers operate the site from May 5th to September 16th this year. They are open on Tuesday and Thursday evenings and most of the day on Saturday and Sunday. In addition, they have weekend professional demonstrations on safe and proper cutting, the effects and what to do about mistletoe, boring insects that kill trees, and other related topics. The Black Forest operation has been used as a model by other counties in setting up similar sites. More details are available at: http://www.bfslash.org/

Fort Collins
After the flood of 1997 the City of Fort Collins became involved with Project Impact which has been a great success throughout the community. 5 lives were lost along with over 150 single family mobile homes. Numerous projects including the DIADVISOR, AM 530 Radio, flood mitigation updates and remapping the floodplain were the result of being involved as a Project Impact Community.

Grand County
Cooperation with the US Forest Service, Grand County Department of Natural Resources, Grand Lake Fire District have developed plans and instituted prescribed burns, slash & mulch burns to begin the process to reduce wildfire fuel sources. This work also includes partnerships with private industry and private organizations who are also removing wildfire fuels. Additional funding is necessary as the beetle killed trees continue to increase faster than the mitigation projects can be funded. Also, this year was the first year the county held a hazardous home waste collection project, through the LEPC. This project allowed homeowners to dispose of hazardous chemicals from their homes, garages, and barns to reduce and prevent dumping or contamination of ground water, landfill, and open grounds. This project was a huge success and determined this is a significant need for the community.

Greeley
A Mitigation Grant in 2005 enabled us to install NOAA Weather Radios in many public facilities around the city of Greeley. The city of Greeley has no emergency sirens so alternate early notification systems are relied upon. Out reach education attempts have shown the importance of NOAA weather radios in homes and business's. The OEM has requested funds for additional radios. to be installed in "specials needs populations" centers located in our community. This attempt is a "build upon" effort to install and maintain a network of weather radios close to public gathering places.

Hinsdale County
Hinsdale County has been pro-active in Pandemic Planning and increasing the self sufficiency of local government and community members alike. The chairman of our LEPC has been hired to develop the West Region Pandemic Plan and he is basing that work off of Hinsdale's earlier efforts. The Plan is still being developed but we have acquired back-up generators for most critical infrastructure buildings and systems in the Lake City community. In addition an Oxygen Generator with Cascade System has been purchased providing Oxygen self sufficiency in the event of a pandemic.

Kiowa County
Kiowa County has been actively outfitting an Emergency Operations Center located in the county courthouse over the past two years through funding from a variety of sources including DHS, CDPHE and county resources. The EOC can support 15 ESFs with computers, printers, telephones, internet access and 800 MHz radio communications capability, as well as other support services. When not in use as an EOC, the facility doubles as a training center. The EOC was most recently activated to support a National Park Service Special Events Team for the opening of the NPS Sand Creek Massacre National Historic Site in late April, and received extensive praise and compliments from all members of the SET. Continued and planned enhancements to the EOC remain a priority for Kiowa County.

Kit Carson County
With the extensive educational programs being implemented in my jurisdiction, the communication, notification, and participation have all increased as well as preparedness in general.

Lakewood
The Rooney Road Recycling Program offers a "slash program " to citizens in the metro area.The program was modified to allow for convenient disposal of yard waste, tree branches, leaves, grass clippings and construction waste by residents in 2005. An estimated 10,000 cubic yards of material were recycled in 2006.

Lincoln County
I was able to obtain weather radios for each residence and public building in Karval, as well as for the fire departments, town halls, recreation facilities, senior centers, libraries, day care centers, schools, all county buildings, the homes of the road & bridge foremen, the hospital, medical clinics, nursing homes, assisted living facilities, low-income housing and other high traffic areas or meeting locations in all of the incorporated towns in Lincoln County. Karval is an unincorporated community and did not have the funding to purchase a warning siren, so the weather radios were an excellent alternative. By placing the radios in the other locations throughout the county, advance warning can be given where larger populations are congregated or the movement of people to shelter would take extra time.

Mesa County
We are currently finishing a wildfire assessment project. This project was funded through a National Park Service Mitigation grant with in-kind costs from Mesa County. We identified an area within a ¼ mile of the National Monument and Redlands Area, to conduct a wildfire assessment survey in which we look at all factors related to the wildland-urban interface area. We take a GPS reading of the structure(s) located on each parcel within this boundary as well as a photograph of the structure(s). We are using software that allows us to capture data on the type of structure, hazards surrounding the structure, fuel types, slope, aspect, ingress/egress routes, etc. This data is being compiled and a community wildfire protection plan will be developed for this specific area. This information will be made available to home owners with recommendations on how they can improve their defensible spacing around their property.

Morgan County
During the Project Impact days the local FFA students in the Weldon Valley Constructed an FEMA approved tornado shelter in the basement of the day care building. This shelter has been used several times do to severe weather. With this being said if the students can follow the blue prints provided then any adult should be able to do the same.

Ouray County
Working with federal and state agencies and the Horsefly Wildfire Protection Association which was planning CWPPs for their district, we have produced a "You Make The Difference" sequel video of "How To" Set Up Cwpps For Your Community.

Park County
After the wildfires of 2002, the Platte Canyon Fire District began extensive work in wildfire mitigation. They have a full-time mitigation officer and they created a CWPP and implemented the recommendations a few years ago. Since that time, they have received grant funds for wildfire mitigation projects in their district and continue to work each year on thinning, chipping and slash projects.

San Miguel County
Wildfire Safety Program. We performed wildfire danger assessments on just under 2000 structure and driveway points throughout the county. The assessments included photos of the structure and driveway and 30 questions relative to defensible space, responder safety and address posting. Results were sent out to each homeowner with tasks to better mitigate fire on their property (where applicable) and results were also posted on our county map site to be available during response to a fire and for research purposes.

Washington County
The NOAA Radio Transmitter on the Anton Tower. This allows the rural people in the southern part of the county to receive weather emergency reports. Also a Grant to purchase NOAA Radios.

Yuma County
Recent success stories involving hazard mitigation involve the City of Wray where mitigation funding helped purchase two new sirens replacing some that were 40+ years old. The Town of Eckley also received assistance for a new siren for their town replacing one that was too small to cover their entire community. The town of Eckley's old siren was placed in the community of Laird which has never had a siren. That siren is maintained by the Yuma County Office of Emergency Management.

Colorado State Forest Service, Alamosa District
Private organizations, such as Homeowners Associations and individual landowners are, however, conducting many projects within their boundaries. We have assisted with significant projects in the Wagon Creek and Forbes Park subdivisions which are located in Costilla County. Both have thinned fuels along roadways and around structures and removed slash material by burning piles or chipping. The same can be said for individual homeowners and associations in Saguache County, Costilla County, Mineral County, Alamosa County and Conejos County. Individuals have created defensible space around their homes, created new water supplies such as dry hydrants and begun overall landscape scale plans such as a Community Wildfire Protection Plan (CWPP). These CWPP's are a great opportunity to bring a number of stakeholders to the table to discuss fire management and safety on a large scale.

Our Alamosa District has conducted many forums that discuss wildfire mitigation and safety for landowners. We continuously meet with homeowners groups and conduct Firewise workshops. For example, last year we met with Wagon Creek and Forbes Park in Costilla County. We presented information at Sheep and Bear Creek in Conejos County, Bonanza Ranch in Saguache County and Zapata Subdivision in Alamosa County. We are working with Baca Grande Fire Department to help implement their CWPP and assisting Saguache County in developing their CWPP. All these various forums allow us as an agency to influence the preparedness levels of our cooperators and clients.

We have developed a wonderful relationship with the Wagon Creek Homeowners Association over the past couple of years. There was very little interest within this organization about fire mitigation, planning or fire safety and we have assisted them in developing their own CWPP and helped with implementing that plan on the ground. With some of our grant funding, they have been able to thin a very dangerous area on their property and treat these fuels. We have raised awareness within their landowners and we are in demand to provide educational materials, site visits and long range planning assistance. Our agency has definitely increased the health and vigor of this ecosystem and helped provide a safer area for firefighters and landowners alike.

Colorado State Forest Service, Canon City District
The Bears Head Ranch in Pueblo County finished a 15 acre fuels reduction project (03-7130-012-115) within and around the Ranch complex (15 structures) in 2004. The following year the Mason Gulch fire threatened to destroy the ranch. The task force leader and crews assigned to protect the ranch utilized the good work implemented by the ranch manager and successfully defended the ranch. The TFLD indicated that the completed mitigation work provided the task force with a good start and confidence in defending the ranch.

Colorado State Forest Service, Durango District
Falls Creek Subdivision Rx Burn & CSFS/USFS "Good Neighbor Agreement" Project: In October 1999, a 21-acre prescribed fire was conducted for wildfire hazard reduction purposes on private and federal lands within and adjacent to the Falls Creek Subdivision by CSFS, with assistance from USFS and Animas Fire Protection District. During the Missionary Ridge Fire in 2002, the Valley Fire suddenly ignited on the opposite side of the Animas River Valley and quickly burned a number of homes and other structures within the subdivision and on adjacent properties. The impact and size of the fire would have been much more severe had it not been for the prescribed burn. The burned area

effectively reduced fire intensity and helped firefighters save a number of other structures. In 2004, additional protection was added when a 66-acre wildfire hazard mitigation tree thinning was completed on private and federal lands under a "Good Neighbor Agreement" between CSFS and USFS.

Also, numerous wildfire mitigation projects, including prescribed burns and mechanical treatments, have been conducted on private, city, state, and federal lands. During 2005-2006, 12,443 acres were treated with Rx burns and 15,722 acres were treated mechanically on federal lands alone. It would take considerable time and space to list all projects here. Many of these projects have involved shrublands (i.e., Gambel oak) in addition to forests and grasslands.

Colorado State Forest Service, Fort Collins District
Lory State Park Fuel Mitigation
In May 2006, mechanical mastication of trees for the purposes of forest fuel reduction and dwarf mistletoe removal was completed on 67 acres of Lory State Park. This mechanical mastication was performed by a Hydro-Ax, which is a large articulated tractor, with an eight foot wide mower–mulcher head mounted on the front. The mulching head is likened to a huge and powerful lawnmower that can mulch trees as large as 10 inches in diameter! The chunks of woody debris that it creates are generally much larger than what a chipper creates yet it distributes the chunks relatively evenly over the ground. This is beneficial because deep mounds of chips can potentially decrease new vegetative growth. The Hydro-Ax also has rubber flotation-type tires that cause little disturbance to the surface of the ground. These features made it an excellent machine to use on this fuel reduction project.

The project location, or unit, within the Park is very strategic; it is bordered on two sides by private property and is on the west side of the Park (see map), a major direction from which prevailing winds come. Fuel reduction in this unit will not only decrease the chance of a fire spreading from the private land to the Park interior, but will also make it easier for a fire in the Park to be contained before it spreads to the private land. Also, many of the ponderosa pines in this unit were heavily infested with the parasitic plant dwarf mistletoe. Infestation in most of the unit's forest stands was not as extensive as other areas of the Park, making it an easier area to control the parasite here.

To control the dwarf mistletoe small clearcuts were created in forest stands where dwarf mistletoe infested every tree. Most of these areas have excellent grass and forb growth and are next to natural meadows on which the sun-loving ponderosa pines were encroaching. In other clearcut areas we expect to see good ponderosa pine regeneration.

In stands where the mistletoe infestation was not as extensive or non-existent, individual trees or groups of trees were removed for fuel reduction. Prolific Douglas-fir regeneration was also targeted for thinning. This method of thinning left all sizes of trees in random clumps, which is how these ponderosa pine stands historically grew before the era of fire suppression. If you have a chance to hike up to this are of the Park you will notice that there is a lot of diversity in forest stand structure throughout the unit, which is highly desirable.

As a benefit to wildlife, two to five large-diameter infested trees per acre were girdled (a method that kills the tree but leaves it standing) so they can be used by wildlife for such things as nesting and insect food. Most previously dead standing trees were also left for wildlife use. In areas where the number of dwarf mistletoe-infested trees that were too large to masticate exceeded five per acre, these trees were cut, de-limbed, and left on the forest floor to provide beneficial large woody debris. The girdling and felling of large infested trees can be looked at as simulating a natural tree-killing event.

In 2007, 140 more acres of ponderosa pine and Douglas-fir fuel reduction will be completed by mechanical mastication. This will include three units to be generally thinned and two fuelbreaks, following recommendations in the Park's Wildfire Hazard and Mitigation Plan. Fuelbreaks are thinned more intensively and most dead trees are removed to improve fire control opportunities. These units are also strategically located to enforce and expand the reduced fuel "buffer" on the west side of the Park. Many of the forest stands in these units have dwarf mistletoe infestations as well. The infested trees will be targeted for removal during the thinning but not all infested trees will be removed. The cutting prescription was developed through much collaboration between CSFS, Colorado State Parks, and a private forestry consultant to ensure that all benefits (fuel reduction, forest health, recreation, wildlife, and water quality) were maximized.

Being a land steward usually means that we have to work with our neighbors. We are very appreciative of the neighbors of Lory State Park for granting permission for CSFS and the forestry contractor to use their roads to reach the project areas.

Colorado State Forest Service, Salida District
As a part of the Lake County Community Wildfire Protection Plan, community members form the Pan Ark Subdivision identified fuels treatments that they wanted completed. Pan Ark Subdivision contracted with the Salida District to mark 18 lots for fuels mitigation treatments. The Salida District had Stevens Funds available for fuels treatment work and fortunately Pan Ark qualified for the funds. Just last week we awarded a contract for all 18 lots to be thinned using the Stevens Funds. The work will begin shortly and will be completed by this summer (2007).

Colorado State Forest Service, Woodland Park District
Teller County was the first County in the State to complete a CWPP and have over 1400 acres of mitigation work planned or completed.

Division of Water Resources, State Engineer's Office,
Standard State Hazard Mitigation Plan Dam and Levee Failure Draft Mitigation Plan
"The State Dam Safety Program and Mitigation Plan has passed the test of time since 1889 and has proven itself to be effective and efficient. Through collaborative efforts more than a century ago, this plan was created and has been improved to include periodic dam inspections based on hazard potential and risk, training capabilities, Annual Reports, and requirements of Emergency Action Plans, to list a few."

North Central Region

Including Adams, Arapahoe, Boulder, Broomfield, Clear Creek, Denver, Douglas, Elbert, Gilpin, and Jefferson Counties

Sources and additional information on this region:

Adams County Comprehensive Plan
Adams County Emergency Manager Survey Response 2007
Arapahoe County Comprehensive Plan
Arapahoe County Emergency Manager Survey Response 2007
Big Dry Creek Northern Tributaries Master Plan Update
Brian Nielsen, Lakewood Emergency Manager
Denver Regional Hazards Mitigation Plan
Denver Water: 2002 Hayman Fire and the Cheesman Area Reclamation
54th and Pecos Street Drainage Master Plan
Four Mile Community Wildfire Protection Plan
Hoffman Master Plan Update
Indian Hills Community Wildfire Protection Plan
Inter Canyon Community Wildfire Protection Plan
Local Plan Review for Integration into State Plan
National Climatic Data Center: Storm Events Database
Northeast Colorado Emergency Management Association Hazard Mitigation Plan
Rick Newman, Adams County Emergency Coordinator
Sgt. Randall E Councell, Arapahoe County Emergency Manager

Northeast Region

Including Cheyenne, Kit Carson, Larimer, Lincoln, Logan, Morgan, Phillips, Sedgwick, Washington, Weld, and Yuma Counties

Sources and additional information on these counties:

Boyd Lebeda, Fort Collins District Forester, CSFS
Chief Mike Gavin, Fort Collins Emergency Manager
Darcy Janssen, Cheyenne & Kit Carson Counties Emergency Manager
Erik Nilsson, Larimer County Emergency Manager
George Severin, Washington County Emergency Manager
Glen Haven/Retreat Communities, Larimer County, CO CWPP
Larimer County, CO Wildfire Hazard Mitigation Regulations for New Construction
Larimer County Emergency Manager Survey Response 2007
Lincoln County Emergency Manager Survey Response 2007
Local Plan Review for Integration into State Plan
Loveland Emergency Manager Survey Response 2007
Mark Turner, Sedgwick County Emergency Manager
Merlin D. Green, Loveland Emergency Manager
Morgan County Emergency Manager Survey Response 2007
National Climatic Data Center: Storm Events Database
Northeastern Colorado Emergency Managers Association Hazard Mitigation Plan
Northern Colorado Regional Hazards Mitigation Plan
Roger Brown, Yuma County Emergency Manager
Roxie Devers, Lincoln County Emergency Manager
Sedgwick County Emergency Manager Survey Response 2007
Stephen Blois, Greeley Emergency Manager
Steve Enfante, Morgan County Emergency Manager
Washington County Emergency Manager Survey Response 2007
Yuma County Emergency Manager Survey Response 2007

Northwest Region

Including Eagle, Garfield, Grand, Jackson, Mesa, Moffat, Pitkin, Rio Blanco, Routt, and Summit Counties

Sources and additional information on these counties:

Barry Smith, Eagle County Emergency Manager
Community Fire Planning in Moffat County, Colorado
Community Fire Plan Moffat County, Colorado
Eagle County, Colorado Wildfire Regulations and Innovative Website
Eagle County Community Wildfire Protection Plan
Eagle County Emergency Management Survey Response 2007
Fish Creek-Sanctuary Community Wildfire Protection Plan 2007
Glenwood Springs Fire Protection District WUI CWPP
Gould Area Community Wildfire Protection Plan 2006
Grand County Emergency Management Survey Response 2007
Greystone Community Fire Mitigation Plan
Grizzly Creek Area Community Wildfire Protection Plan 2006
John Hutchins, Rio Blanco Emergency Manager
Kent Crowder, Jackson County Emergency Manager
Kimberly Bullen, Mesa County Emergency Manager
Local Plan Review for Integration into State Plan
Mesa County Colorado Pre-Disaster Mitigation Plan
Mesa County Emergency Management Survey Response 2007
Mike Stern, Grand County Emergency Manager
Multi-Jurisdictional All-Hazards Pre-Disaster Mitigation Plan For Grand County, Colorado, USA
Multi-jurisdictional All-Hazards Pre-Disaster Mitigation Plan for Pitkin and Eagle Counties
National Climatic Data Center: Storm Events Database
Ray Jennings, Grand County Emergency Management Director
Rio Blanco County Pre-Disaster Natural Hazards Strategic Mitigation Program and Plan
Rio Blanco Emergency Management Survey Response 2007
Summit County Community Wildfire Protection Plan 2006

San Luis Region

Including Alamosa, Conejos, Costilla, Mineral, Rio Grande, and Saguache Counties

Sources and additional information on these counties:

Alamosa County Emergency Manager Survey Response 2007
Colorado Connection Summer/Fall 2006 - Zapata CWPP Mitigation
Jeff Burns, Alamosa Region District Forester, CSFS
Kimberly Bryant, Saguache County Emergency Manager
National Climatic Data Center: Storm Events Database
Patricia Gavelda, Regional Manager, Colorado Division of Emergency Management
Pete Magee, Alamosa County Emergency Manager
Saguache County Emergency Manager Survey Response 2007
The Baca Grande Property Owners Association Board Policy And Procedure Regarding Defensible Space Plans

South Region

Including Custer, Fremont, Huerfano, Las Animas, and Pueblo Counties

Sources and additional information on these counties:
Chad Ray, Colorado Division of Emergency Management
John Grieve, Canon City District Forester, CSFS
Local Plan Review for Integration into State Plan
National Climatic Data Center: Storm Events Database
Pueblo County Community Wildfire Protection Plan For Southwest Pueblo County, Colorado
Sante Fe Trail Ranch Community Wildfire Protection Plan
Upper Arkansas Area Council of Governments Hazard Mitigation Plan

South Central Region

Including Chaffee, El Paso, Lake, Park, and Teller Counties

Sources and additional information on these counties:
El Paso County Emergency Manager Survey Response 2007
Jeffrey Foley, Lake County Emergency Manager
Jim Mesite, El Paso County Emergency Manager
Lake County Emergency Manager Survey Response 2007
Larry Long, Woodland Park District Forester, CSFS
Laura Nay, Colorado Division of Emergency Management
Local Plan Review for Integration into State Plan
Lori R. Hodges, Park County Emergency Management Director
National Climatic Data Center: Storm Events Database
Park County Emergency Manager Survey Response 2007
Pre-Disaster Mitigation Plan for Colorado Springs, Colorado
Upper Arkansas Area Council of Governments Hazard Mitigation Plan

Southeast Region

Including Baca, Bent, Crowley, Kiowa, Otero, and Prowers Counties

Sources and additional information on these counties:
Baca County Pre-Disaster Mitigation Plan September 2004
Chad Ray, Colorado Division of Emergency Management
Chris Sorensen, Kiowa County Emergency Manager
Kiowa County Emergency Manager Survey Response 2007
Local Plan Review for Integration into State Plan
National Climatic Data Center: Storm Events Database
Prowers County Pre-Disaster Mitigation Plan
2002 Bent County/City of Las Animas Comprehensive Plan

Southwest Region

Including Archuleta, Dolores, La Plata, Montezuma, and San Juan Counties

Sources and additional information on these counties:
Archuleta County Community Fire Plan
Archuleta County Community Plan
Archuleta County Community Wildfire Protection Plan
Archuleta County Emergency Manager Survey Response 2007
Archuleta County Emergency Manager Survey Response 2007
Archuleta County, CO - Ordinance for Subdivision Design Standards
Archuleta/Pagosa Springs Community Plan
Archuleta/Pagosa Springs: Building Trends
Archuleta/Pagosa Springs: Floodplain Regulations
Archuleta/Pagosa Springs: Land Use Regulation Amendments (Flood Hazard Areas)
Cedar Mesa Ranches, CO-A Subdivision Fire Plan
Dolores County Community Fire Plan
Dolores County Emergency Manager Survey Response 2007
Dolores County Pre-Disaster Mitigation Plan
Joe Bigley, Archuleta County Emergency Management
Kent Grant, Durango Acting District Forester, CSFS
La Plata County Community Wildfire Protection Plan
La Plata County, CO-CWPP adapted from a Community Fire Plan
Local Plan Review for Integration into State Plan
Montezuma County Community Development Action Plan 2006
Montezuma County Community Fire Plan
National Climatic Data Center: Storm Events Database
Patricia Gavelda, Colorado Division of Emergency Management
R. Allan Anderson, Dolores County Emergency Manager
San Juan County-Community Fire Plan

West Region

Including Delta, Gunnison, Hinsdale, Montrose, Ouray, and San Miguel Counties

Sources and additional information on these counties:
Alan Staehle, Ouray County Emergency Manager
Delta County Colorado Hazard and Risk Assessment May 2003
Delta County Emergency Manager Survey Response 2007
Gunnison County, Colorado All-Hazard Mitigation Plan 2003
Hinsdale County All Hazard Mitigation Plan
Hinsdale County Emergency Manager Survey Response 2007
Jennifer Dinsmore, San Miguel County Emergency Manager
Jerry Gray, Hinsdale County Emergency Manager
Local Plan Review for Integration into State Plan
National Climatic Data Center: Storm Events Database
Ouray County Emergency Manager Survey Response 2007
Ouray County, CO-Wildfire Hazard Mitigation Regulations
Rob Fiedler, Delta County Emergency Management Director
San Miguel County Emergency Manager Survey Response 2007
Steve Denney, Colorado Division of Emergency Management