

**AFTER ACTION REPORT  
1984 WESTERN SLOPE  
DISASTER**

Prepared for  
**COLORADO DIVISION OF DISASTER  
EMERGENCY SERVICES (DODES)  
GOLDEN, COLORADO**

By  
**Robert L. Kistner**

**MARCH 1989**

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## PREFACE

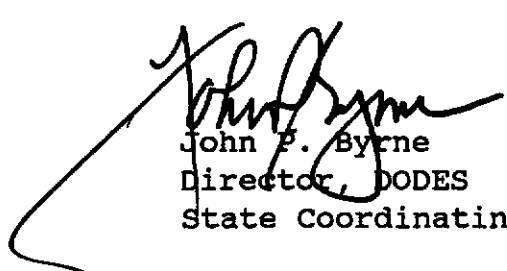
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### FROM THE DIRECTOR

Historically, major disasters have occurred in Colorado, and given Colorado's growth environment, it is highly likely they will continue to occur in the future with greater frequency.

This report provides a record of one such major disaster. It describes what occurred and how government responded. It identifies those innovative actions that evolved, such as the use of computers, and the integration of mitigation into the disaster recovery process. It further identifies lessons learned and provides recommendations as a road map for future disaster recovery programs. It is the first report of its kind in Colorado, and as such, provides a model for future such reports.

I offer it to you for your professional understanding of major disasters, their impacts and the disaster recovery activities that follow in their wake.



John P. Byrne  
Director, DODES  
State Coordinating Officer

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**Reflections  
of the  
Governor's Authorized  
Representative**

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Having worked on three different Presidential Major Disasters (1976 Big Thompson, 1982 Lawn Lake, and this one) it has been interesting to note the changes that have taken place in the disaster public assistance program over the years. The increasing use of computers, development of standardized scopes of work, unit pricing and the increase in applicant liaison are all items that have led to a more effective program, even in light of the growing complexity of program issues that face us today. The current federal philosophy of giving more program responsibility to the states, even though it may encounter some rough spots during the transition period, will in the long run prove to be beneficial to the program.

The increased emphasis on hazard mitigation and its refinement should help to significantly lower future disaster costs. The program is a long way from being perfect but significant improvements have been made and more are to come. Future emphasis should lie in shortening the recovery period, and being more cost efficient in the process. There is always the tendency, especially with the availability of more data, to want to micro manage even when it is cost ineffective and inefficient to do so. This must be avoided so that the intent of the program, to provide supplemental disaster assistance to the state and local governments, and selected private nonprofit entities in time of crisis, can be achieved in a timely, efficient, and cost effective way.

The report you are about to read provides, in summary fashion, an accurate overview of Colorado's Presidential Major Disaster and the recovery process associated with it. In reading through it you will get a feel for the complexity of the disaster recovery process and the issues that arise which must be addressed.

For the first time, in this disaster, the state became deeply involved in the recovery process providing continuous applicant liaison, technical advice and assistance, and in general operating the program on a day-to-day basis. The result was a highly beneficial, and from most perceptions, a successful disaster recovery program.

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**Reflections**  
(Continued)

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Even though there are acknowledgements in another section of this report, special recognition should be given to the state temporary hire disaster recovery staff without whom the disaster recovery program may have been a disaster in and of itself. Members of this staff included:

Deputy Governor's Authorized Representative.....Bill Martin  
Public Assistance Officer .....Robert Kistner  
Public Assistance Officer .....Robert Wold  
Secretary/Administrative Assistant .....Nora Rimando  
Secretary/Administrative Assistant .....Amalia Johnson

Bob Kistner, the author of this report is especially deserving of the credit for this product. His interest, professionalism, and attention to detail in researching and compiling the material for this report goes far beyond that normally expected in a contractual arrangement thus resulting in what I believe, and what you will find to be, an excellent example of what an after-action report should be.

Leonard A. Boulas  
Governor's Authorized Representative  
FEMA-719-DR

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## ACKNOWLEDGEMENTS

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The following federal, state, and local agencies assisted in the preparation of this report:

### FEDERAL AGENCIES

Federal Emergency Management Agency  
Federal Highway Administration  
U.S. Army Corps of Engineers  
National Weather Service  
U.S. Forest Service  
Small Business Administration  
USDA Soil Conservation Service

### STATE AGENCIES

Department of Public Safety  
Department of Natural Resources  
Colorado Water Conservation Board  
Department of Health  
Colorado Geological Survey  
Department of Local Affairs  
Department of Agriculture  
Department of Administration  
Department of Highways  
State Climatologist  
State Engineers Office

### LOCAL AGENCIES

Counties, cities, towns, associations, and special districts comprising some 66 political subdivisions within the declared disaster area.

In addition to these agency contributions, several staff members of the Division of Disaster Emergency Services (DODES) provided written contributions and valuable feedback.

In preparing this report, it was necessary to review and include a considerable amount of background material at a high level of detail.

Robert L. Kistner  
Public Assistance Officer

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## EXECUTIVE SUMMARY

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In the Spring of 1984, severe and extensive snowmelt runoff over a short duration caused widespread flood and landslide damage on the Western Slope, impacting population areas, causing damages to roads and bridges, agricultural lands, and public facilities. Damages from the flooding totaled over \$29 million. On July 27, 1984, President Ronald Reagan issued a major disaster declaration for Colorado.

During the preceding year, heavy winter snowpack and rain along the Western Slope caused flooding and contributed to the subsequent year's major events. During early May, temperatures in the 80's and 90's caused rapid snowmelt resulting in flooding along major Western Slope streams. By July 4th, all flood warnings and watches were withdrawn as weather conditions indicated a cooling trend slowing stream flows.

Ten counties and the state of Colorado were included in the initial Presidential Major Disaster Declaration. Five additional counties were added later following additional justification for their eligibility. This declaration covered sixty six separate political subdivisions (cities, towns, counties, and special districts) and four state agencies. Federal-State inspectors completed 606 individual damage survey reports throughout the disaster area.

Each of the fifteen counties included in the disaster declaration presents a unique story in both disaster events and recovery activities. Each of these is reviewed individually to detail the types of impacts in each location, the recovery activities completed and in progress, and the hazard mitigation planning instigated during the 1984 disaster. With few exceptions, the recovery effort has been effective at all levels and hazard mitigation planning has become instrumental in local and state government recovery activities.

The total cost of the 1984 Western Slope Disaster will not be fully realized for a long time. Indirect and direct costs are currently estimated at \$29 million for floods and landslides. The federal government expended over \$9 million compared to \$2 million of state dollars, a four to one ratio. Local governments spent over \$3.5 million in their recovery efforts, with private dollar damage estimates at \$14.5 million.

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## EXECUTIVE SUMMARY

(Continued)

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During the recovery phase of the disaster, several communities implemented creative hazard mitigation measures. Experts, public officials, and laymen alike worked long and hard to analyze the existing problems, create solutions, and devise implementation strategies.

As a product of this report, sixteen recommendations have been identified to improve federal and state response and recovery activities. Actions on many of the recommendations are now underway. The Colorado Division of Disaster Emergency Services (DODES) will pursue implementation of all of the various recommendations.

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**CHAPTER 1**  
**INTRODUCTION**

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## **CHAPTER 1 - INTRODUCTION**

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### **PURPOSE**

This after-action report provides an assessment of the 1984 Western Slope flood, investigates the severity of the impacts, reviews actions taken by the various jurisdictions and agencies, and identifies the lessons learned for use in administering future disaster recovery programs.

The contents of this report can be used as the basis for future preparedness, response, and recovery actions in similar flood incidents.

### **SCOPE**

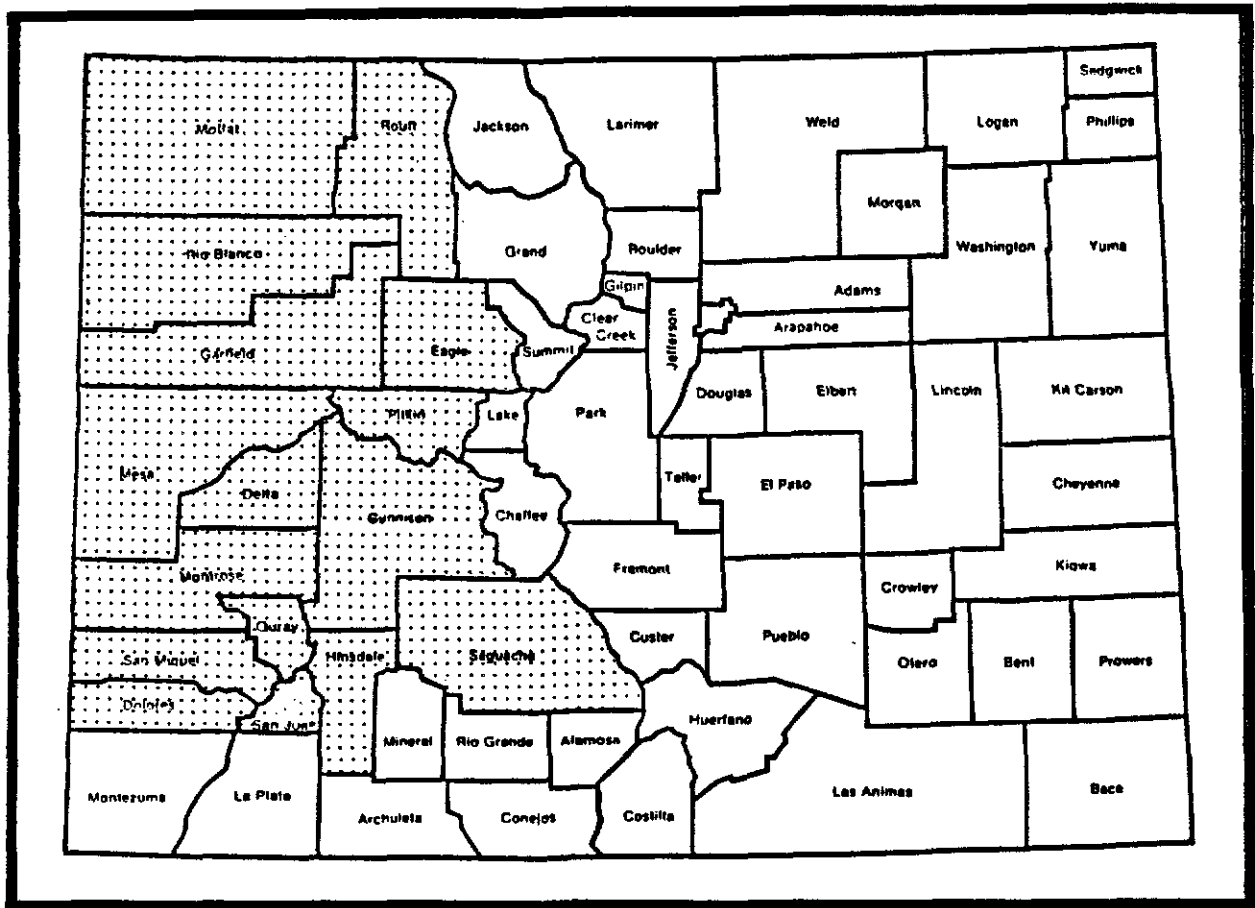
This report addresses issues relevant to the fifteen counties impacted by the 1984 spring flooding. From a county-by-county inventory of flood impacts and specific recovery efforts to a report on specific mitigation measures undertaken, this report will discuss the major achievements of Colorado's 1984 recovery as well as the ongoing mitigation and recovery planning process. The geographic area of the report includes the counties of Colorado's Western Slope: Delta, Dolores, Eagle, Garfield, Gunnison, Hinsdale, Mesa, Moffat, Montrose, Ouray,

Pitkin, Rio Blanco, Routt, Saguache, and San Miguel. Also included are the forty-nine cities, towns, special districts, electric co-op's, and four state agencies which were applicants for federal disaster public assistance (see Figure 1. Page 2 Presidentially Declared Counties).

### **BACKGROUND DESCRIPTION**

One of the most severe and extensive snowmelts in the history of Colorado occurred during the spring of 1984. Widespread flood and landslide damage on the Western Slope impacted populated areas causing damages to roads and bridges, agricultural lands, and public facilities. Damages from the flooding totaled over \$29 million dollars.

Although the presidential disaster declaration was made on July 27, 1984, important conditions in the preceding year contributed to the subsequent year's major events. During 1983, heavy winter snowpack and rain caused flooding throughout the Western Slope.



**Figure 1. Presidential Declared Counties**

Soil moisture remained abnormally high as the next year's snow accumulated. This cumulative effect caused soils along the river banks to lose their consistency and begin to deteriorate even before the 1984 runoff season reached its peak.

Beginning in early January 1984, snow surveys indicated a higher than average snowpack depth at the higher elevations

throughout Colorado. Berthoud Summit broke an old record set in 1957 by 5.1 inches of snow water equivalent. Lower elevation precipitation at National Weather Service Stations reported above average April accumulations. The central and northern portions of the state received a large increase in snowpack in May. An increase of 22% during May brought the statewide figure to 149% of average. The Arkansas

River Basin received the highest snowpack at 191% of average. The Colorado River Basin was well above average at 169% of average, followed closely by the Gunnison River Basin at 162%. Nearly 40% of the snow course measurements made in the Colorado and Gunnison River drainages set new records for May.

During early May, an abrupt change in weather conditions with temperatures in the 80's and 90's caused rapid snowmelt affecting many of the small tributaries feeding into the major river basins. The Uncompahgre River reached the second highest flow on record at 3500 c.f.s. In addition to the Yampa, Colorado and Uncompahgre Rivers, the Gunnison was flowing near flood stage with flood warnings issued for the upper reaches of the Gunnison.

Flooding in Delta County caused the evacuation of five families. At Silt, the Colorado River threatened to overtop the Water Treatment Plant located on an island in the river. Corps of Engineers, Town crews, and volunteers waged a valiant flood fight, including the use of a helicopter, to save the facility. The Town of Oak Creek in Routt County lost all four of its bridges, which divided the town in two.

In Eagle County, the northern road into Red Cliff was closed due to a landslide. Landslides in both east and west Vail caused damage to several condominiums and threatened others. On the morning of May



Photo 1. Landslide at Vail Innundates Home.

26th, a Landslide east of Vail closed all four lanes of Interstate 70 for several hours.

Continual high flows, at or near flood stage at many locations along the major river basins of the state, continued to take their toll of public works facilities at or near the streams and rivers towards the end of May.

Flooding and landslides throughout the state affected dozens of communities. Flooding occurred in the streets of several towns, bridges were washed out, roads were closed, water lines were broken, water supplies were

contaminated, farm lands were flooded, and several areas were evacuated.

By June 4th, all flood warnings and watches were withdrawn as weather conditions indicated a cooling trend slowing stream flows. By mid-June, initial damage assessments were progressing and massive clean up efforts were underway.

Both the public and private sectors responded to the emergency in the state. Local, state, and federal government entities worked closely with private citizens, local industries, and community groups to mount an effective response to each situation.

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**CHAPTER 2**

**WESTERN SLOPE DAMAGE IMPACTS  
AND DIRECT RECOVERY ACTIONS**

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## CHAPTER 2 - WESTERN SLOPE DAMAGE IMPACTS AND DIRECT RECOVERY ACTIONS

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The magnitude of Colorado's disaster is well illustrated by the overall financial impact to the state. It is also apparent in each effected county's story. This section details the damage conditions that occurred as extracted from information in 606 Damage Survey Reports (DSR's). It depicts the damage and its causes. In nearly all cases, damage was the direct result of high stream flow runoff or unanticipated landslides. This county-by-county inventory identifies problems, damages, and associated recovery and mitigation activities.

### DOLORES COUNTY

Landslides impacted county roads within this rural county. Along County Road 31, and one mile south of the San Miguel County line, a new slide developed in the "Disappointment Slide" area. County road crews spent many man and equipment hours removing slide material attempting to maintain emergency use of the road. Over 1640 ft. of roadbed slumped out above and below the road. County officials consulted with private, state and federal geologists for recommendations in stabilizing the slide. The Federal Highway Engineer (FHWA) recommended road stabilization at the present location, however, private consultants

recommended relocating the road. Further investigations by engineers revealed no practical way of rerouting the roadway.



Photo 2. New Alignment of the Disappointment Slide, Dolores County.

The road was eventually rerouted, to an area still subject to movement, however, the new site is considered to be safer than the original location which was used on an emergency basis. The road is now stabilized and traffic is able to pass safely. County officials expended over \$75,000 in Federal, State, and local funds in their efforts.

## DELTA COUNTY

The Uncompahgre River, swollen with snowmelt floodwaters, threatened railroad tracks, a county road, and the developed area near County Road G. Over \$33,000 was spent constructing a levee to protect the sites. Near Paonia, and the confluence of the North Fork of Gunnison River and Le Roux Creek, Delta County work crews and volunteers placed rip-rap and sandbags to protect adjacent improved lands. At County Road 1700 bridge over the Uncompahgre River, damage to bridge piers and wingwalls occurred from the force of the floodwaters. At County Road 1600 bridge over the Uncompahgre River, damage to bridge abutments, wingwalls, and piers occurred. Along Smith Road near County Road 3850, a washout and slide closed the road for extended periods. The Black Bridge over the North Fork of the Gunnison suffered damage to both wingwalls. Along County Road 3300 near State Highway 92, Le Roux Creek, swollen with floodwaters, washed out a large culvert and portions of roadway.

City of Delta - Over 6,000 sandbags were installed by city crews and volunteers protecting homes along Vine Street from floodwaters of the Uncompahgre River. The 5th Street Bridge over the Uncompahgre River was closed during the flood due to a damaged abutment. The City's waste water lagoons adjacent to the Uncompahgre River were threatened, however, city crews

placed fill and rip-rap successfully protecting the facility.

A sewage interceptor line to the sewage treatment plant was destroyed. The new interceptor line has been encased in concrete and protected with rip-rap at a cost of over \$135,000. Over 450 ft. of twelve inch water line crossing the Gunnison River was washed away by floodwaters. The replacement water line was installed on the downstream underside of the Fifth Street Bridge to prevent future damages.

Delta-Montrose Electric Association - Landslides near the Cimmaron Substation inundated transmission poles, laying the poles over, disrupting service, and creating a public safety hazard. Over 9,000 ft. of 3 phase transmission line was destroyed at this site. Electric officials relocated the new line and transmission poles out of the landslide area. Along the Gunnison River numerous transmission poles were undermined by the high floodwaters of the river. Near Delta, the main service crossing the Gunnison River was destroyed. In every case, the replacement lines and poles have been relocated to prevent future damage from landslides and flooding.

Hotchkiss Sanitation District Floodwaters in the North Fork of the Gunnison River eroded the stream banks near the District's waste water treatment plant. Over 300 ft. of stream bank was destroyed

including 40 ft. of sewer out-fall sewer drain. The Soil Conservation Service provided assistance in the construction of emergency stream bank protection under the SCS Emergency Watershed Program. A new levee/stream bank protection project now is in place to protect the waste water treatment plant against future floodwaters.

**Tri-County Water Conservation District** - A water line on Delta County Road "B" bridge over the Uncompahgre River near the Town of Chipeta was threatened by floodwaters. Debris carried by floodwaters collected against the water line positioned on the upstream side of the bridge. District crews installed valves on both sides of the crossing and removed the line before damage could occur. After the floodwaters subsided, the district installed the line on the downstream side of the bridge. FEMA paid for the removal and installation of the line at its original location, however, District dollars paid for the additional costs of installation at the new location.

**Paonia** - High flood flows along the North Fork of the Gunnison River caused a loss of erosion control rip-rap at the location of the Riverside Estates subdivision. Two homes were destroyed when bank erosion washed away their foundations (see Photo 3). Over 10,000 cubic yards of material was replaced along the banks. An effort to relocate the remaining homes failed due to a lack of local support (see

Chapter 10 - Mitigation Section).



Photo 3. Riverside Estates  
Paonia.

An eight inch water line under the river near the Highway 187 bridge was washed away. The replacement water line was relocated to the downstream underside of the bridge to protect it against future damage. High flows along Minnesota Creek destroyed portions of a sewer line causing a sewage discharge into the creek. The damaged sewer line was replaced and relocated away from the stream to minimize future damage. At the Third Street Bridge in town, over 230 ft. of six inch water line under the river was washed away. An emergency water line was installed to maintain service to the town. The replacement water line was installed on the underside downstream side of the bridge and insulated to protect against future damage.



## EAGLE COUNTY

County Road crews cleared a landslide from High Street just outside Red Cliff's corporate limits. Along Squaw Creek Road near the Forest District, landslides inundated the roadway. Along the Gypsum Creek Road to Lede Reservoir, a landslide, timber and debris closed the road for extended periods. Along County Road 301, road crews installed rip-rap protection where the Colorado River undercut the roadway. At Colorado River Road (RD. 301) bridge, floodwaters destroyed the southwest approach to the bridge. Along Frying Pan Road at Taylor Creek, a large culvert was plugged with debris. Road crews attempted to clear the culvert, however, the flow was so great the 72 inch culvert washed away with sections of roadway.

Beaver Creek Metropolitan District - A landslide along Elk Track Road inundated the roadway and drainage system. The slide also destroyed a major portion of one new home.

Eagle Sanitation District - Floodwaters of the Eagle River and Brush Creek impacted the District's recently constructed waste water treatment plant and lift station just downstream of the Town of Eagle. District crews and volunteers installed over 350 cubic yards of rip-rap preventing possible loss of the facility.

Minturn - High flood water in the Eagle River impacted several bridges within the town limits. The Cemetery bridge

was nearly knocked from its abutments, however town crews installed cables and "dead men" to anchor the bridge against the flows. A debris flow inundated the Town's ball field and nearly toppled a local radio station transmission tower. Over 3,000 sand bags were placed at strategic locations throughout the town to protect buildings, roads and residents from flood waters of the Eagle River.

Red Cliff - Snowmelt and high water in the Eagle River and Turkey Creek impacted bridges and the waste water treatment plant. Town volunteers waged a flood-fight effort to save several buildings.



Photo 4. Landslide Closes High Road into Red Cliff.

A landslide originating on a north hillside above the Town inundated one of the only access roads into town, pushed one home from its foundation, and caused damage to two

others. Following the landslide clean-up, a Colorado Geological Survey geologist noted unstable landslide material on the mountainside above town. A landslide warning system was installed to warn residents of future flows (see Mitigation Section).

Vail - Spring flooding and landslides damaged buildings, closed roads, and forced evacuations within Vail. Vail fire department and volunteers waged a flood-fight effort to direct floodwaters and debris flows away from homes and businesses. Some buildings were damaged from mud that smashed through windows on the uphill sides of buildings, filling ground floor units. Ten units were flooded with mud and forty units in the area were evacuated.



Photo 5. Landslide Along Bald Mountain Road in Vail.

Over 300 cubic yards of material was deposited on the roads, culverts and ditches. The town spent over \$100,000 in

emergency protective measures, including sandbagging and hauling off materials from debris flows along Snowberry Drive, Booth Creek, Bald Mountain Road and Vail Valley Drive.

A large section of Snowberry Drive roadway above the town slumped out due to wet conditions; the roadway was relocated into more stable material for emergency use. FEMA reimbursement was limited to restoring the road to its original condition, however, the town spent several thousand dollars more in their mitigation efforts.

Vail Valley Consolidated Water District - A landslide above Booth Creek on the east side of Vail inundated the District's water infiltration gallery. The District installed new lines and relocated Booth Creek to minimize possible future landslide damage. The slide also caused minor damage to two homes in the area.

Basalt Sanitation District - High water in the Roaring Fork River threatened the waste water treatment plant near Basalt. The District, under emergency flood-fight conditions, constructed over 250 ft. of levee to protect the plant from flood inundation.

## GARFIELD COUNTY

The Colorado River, swollen with flood waters, breached the north bank near the UNA Bridge and threatened County Road 300.



Photo 6. Colorado River East End of Glenwood Canyon Along US 6 and I-70, Floodwaters are One Ft. Above Highway.

Over 1,500 cubic yards of rip-rap and fill were required to protect the embankment. At County Road 113 and Cattle Creek, a seven ft. culvert washed out destroying the road crossing. A temporary bridge was installed until new culverts could be placed. A bridge at County Road 343 over West Divide Creek suffered damage when the stream eroded the embankment, wing wall, and abutment. County Road and Bridge Crews replaced the wing wall, abutment, and re-set the bridge.

Along County Road 324, a bridge over West Divide Creek was destroyed by raging floodwater. Road and Bridge crews replaced the bridge to new state bridge standards at a cost of over \$39,000, only to discover the bridge had not been surveyed by the joint federal-state-local government damage estimation

team in 1984. Garfield County has requested reimbursement for the bridge repairs in their final claim.

The Rulison Road Bridge over the Colorado River suffered damage to the abutment and wing wall due to high snowmelt flows of the river.

Glenwood Springs - A landslide inundated the 1900 block of Midland Avenue within the city. The landslide deposited over 1,800 cubic yards of material onto the roadway. Near the KMTS radio tower a landslide covered the road stopping all traffic into the area for a short period. The replacement road was relocated to minimize future impact from slides in the area.

Holy Cross Electric Association

A landslide southwest of the Aspen city limits destroyed primary circuits and caused temporary power outages in Aspen. Electric crews re-routed the electric lines to minimize possible future damages. Two overhead transmission lines were lost when the Crystal River near Aspen overtopped its banks. These lines were also relocated to prevent future damage.

New Castle - High water flows along East Elk Creek threatened to destroy the Town's raw water line and control structure upstream of town. Town crews installed rip-rap protection at both locations and were successful in preventing thousands of dollars in damage to the facility.

**Parachute** - Town crews constructed over 400 ft. of five ft. high earth berm to protect Cottonwood Park located on the north bank of the Colorado River. The town used over 600 sand bags in their efforts to save the park. Only a small portion of the park was damaged due to the flood-fight efforts. High floodwaters along Parachute Creek washed away two small diversion dams upstream of town and destroyed a four inch water line within the town. The diversion dams were replaced with private and local funding. The replacement water line was flood protected by encasing the line in concrete. At the town's water treatment plant, high floodwaters of the Colorado River washed away over 175 ft. of rip-rap and threatened the plant.

**Rifle** - Within the town, a road culvert was removed by town crews during high flows when it became plugged with debris. A water main mounted on a bridge over the Colorado River was damaged by high flows. Additional high flows along Rifle Creek damaged the town's mountain park picnic tables, parking areas and road system.

**Silt** - The Colorado River, swollen with spring snowmelt, threatened the town's water intake and treatment facility located on Keithery Island.

Town crews and volunteers waged a fierce flood-fight battle on Keithery Island to prevent floodwaters from overtopping the island. When the floodwaters subsided, it was evident that the infiltration galleries and water intake were



**Photo 7. Volunteers Assist in Sandbagging Efforts at the Silt Water Plant on Keithery Island.**

damaged. Town officials requested assistance from FEMA in relocating the facility to a flood protected location at a cost of over \$1,000,000. However, Public Law 93-288 only allows for funding in repairing the existing facility or a Grant-in-Lieu for relocation. FEMA reimbursed the Town for flood fight costs, a new filter at the plant, and funds for repair of the plant totaling over \$100,000 (see Mitigation Section).

## **GUNNISON COUNTY**

Over forty eight Damage Survey Reports (DSR's) were written within this rural county totaling over \$300,000. Landslides and flooding along

county roads kept county road crews busy during the spring runoff. Major damage occurred to County Road 32 bridge over the Gunnison River when floodwaters undercut a main support bridge caisson resulting in partial failure of the structure. High floodwaters in Ohio Creek caused total failure of a bridge abutment at County Road 727. Massive landslides along County Road 21 at three sites plugged culverts and washed away sections of the roadbed. At County Road 749 bridge over the East River, floodwaters destroyed portions of the structure forcing detours in the area. Landslides along County Road 765 forced closure of the National Forest access. Near the Kebler Mine along County Road 737, road slip-outs occurred closing portions of the road for extended periods. A railroad flatcar was installed along County Road 45 as a temporary crossing for stranded cattle. Along County Road 771, the roadbed was washed out at six locations.

City of Gunnison - In the northwest area of the City, high floodwaters of the Gunnison River threatened roads, public facilities, and 150 residences. City work crews and volunteers constructed over 750 ft. of levee near Spencer Street and successfully protected the City from floodwaters. The City's actions prevented thousands of dollars in damage to public and private investments. Five homes within the Dos Rios Subdivision located on Tomichi Trail were inundated with floodwaters.



Photo 8. Sandbags Protect Subdivision in Gunnison

City crews constructed a 120 ft. levee and successfully prevented damage to additional homes and property.

Crested Butte - During early May, floodwaters of Coal Creek within the town limits threatened public and private facilities. Town crews and volunteers waged a four day flood-fight along the banks of the creek sandbagging and removing debris from bridge openings. After floodwaters subsided, work crews were faced with the loss of over 376 ft. of a rock flood wall that had collapsed. The replacement flood wall was constructed with better materials and reinforced to prevent future damage.

Gunnison County Electric Association - High flows along Quartz Creek eroded the stream bank destroying a utility pole and service. Along Cebolla Creek near Gunnison, an

underground utility line carrying 25,000 volts was exposed and destroyed. Utility crews installed an overhead line away from the creek to mitigate possible future flood damage. Floodwaters along Blue Creek caused damage to an underground conduit and cable. Within the City of Gunnison, Clark Stream exposed and damaged portions of an underground conduit.

Gunnison Health Care Center - High floodwaters in the Gunnison River forced the evacuation of the Gunnison Health Care Center located within the City of Gunnison. An evacuation was ordered by the Gunnison County Sheriff when floodwaters surrounded three sides of the facility. Staff, supplies, and equipment were moved to Western State College until floodwaters subsided. The building did not suffer flood damage and was covered by a National Flood Insurance policy. Personnel and moving funds were the only costs associated with this applicant's claim.

Town of Pitkin - Spring flooding of Armstrong and Quartz Creeks caused problems for town crews and volunteers at numerous locations. At Second Street emergency work involved the installation of a second culvert to increase the capacity of Armstrong Creek. The Fifth Street Bridge over Quartz Creek was destroyed. A new bridge was constructed to accommodate 25-year flood design standards.

## HINSDALE COUNTY

Within the Town of Lake City, county crews placed over 800 ft. of levee along Wade Gulch Creek when floodwaters threatened businesses, homes, and the local sewer system. Over 200 ft. of levee was placed along the Gunnison River within the town limits to protect businesses and homes against floodwaters. High water along Rock Creek on County Road 5 destroyed the south bridge abutment. At Slumgullion Creek and East Lake Road, a wooden box culvert was washed away.

## Lake City Area Water and Sanitation District -

Henderson Creek, swollen with spring snow melt floodwaters, inundated and threatened to destroy the District's water infiltration gallery. District crews assisted by Hinsdale County road crews successfully protected the facility with rip-rap. The heavy runoff inundated the waste water treatment plant causing the groundwater to rise within the lagoons and pump pit. In the eastern portion of town a six inch water line was washed away disrupting service to residents. The District replaced the service with a six inch ductile iron pipe buried deeper and protected with rip-rap in the stream bed. Relocating the water line on the bridge was not an option due to the extreme cold winter weather of this mountain community.

## MESA COUNTY

High flows along the Colorado River, Buzzard and Plateau

Creeks inundated roads, bridges, and public facilities. Along Buzzard Creek at the Gunderson Bridge, one county employee lost his life when swept from the bridge in a county truck. The Brush Creek road bridge over Buzzard Creek lost its wingwalls and abutments forcing county crews to place a temporary bridge at this location. The Colorado River eroded a levee system near 32 1/4 road and destroyed portions of an open space bike path/levee near the Connected Lakes Park.



Photo 9. Floodwaters Near the Grand Valley Rendering Plant in Mesa County.

Landslides near Vega Lake closed portions of the only access road for emergency vehicles for days.

Clifton Sanitation District No.1 - High flows in the Colorado River overtopped and washed out over 200 ft. of

flood control levee protecting the District's sewage treatment plant. The levee was restored to its pre-disaster condition using rip-rap protection.

Clifton Sanitation No. 2 - High flows of the Colorado River also impacted the District's levee protecting the sewage treatment plant. The levee was constructed at a cost of \$165,000 after the flood of 1983 and before the incident period of this disaster. Over \$17,000 was authorized by FEMA for repair of the levee system.

Clifton Water District - The Colorado River threatened the District's water plant. District officials contracted with Elam Construction to construct a rock and earth levee to protect the plant.

Collbran - Spring snowmelt and resulting high water in Plateau Creek washed away water and sewer lines, damaged the town's rodeo grounds, tennis courts, threatened homes, and damaged two bridges. Over 500 ft. of sewer line was destroyed along Plateau Creek. The replacement sewer line was relocated to protect against possible future damage. The Buzzard Creek Bridge was damaged when high flows along the creek impacted the bridge. Over 12,000 cubic yards of debris was removed from the rodeo grounds and tennis courts. The rodeo facility was reestablished in its original location, however, a levee was constructed upstream to protect it. The tennis courts were moved to high ground above the town and expanded. The town was able to take a FEMA Grant-in-Lieu to

move and expand the tennis facility. The contractor involved in the rodeo ground renovation defaulted during reconstruction, causing the contractor's bonding company to complete the job with time delays.

Debeque - The Colorado River eroded over 900 ft. of rip-rap protected levee protecting the Town's sewage lagoon. DeBeque's Town Park and lake located on the south bank of the Colorado River was overtopped by floodwaters and deposited with silt and debris. A Damage Survey Report (DSR) was written by the Corps of Engineers to remove the debris and restore the facility. Town officials elected to take FEMA "flexible funding" instead of restoring the facility citing liability insurance problems associated with the lake.

Grand Junction - City Public Works crews waged a flood fight along the right bank of the Colorado River when high flows threatened public and private improved property. High floodwaters of the Colorado River switched channels near the Broadway Bridge and scoured the channel bottom destroying eight and ten-inch sewer lines. FEMA authorized mitigation measures to relocate the lines on the downstream side of the Broadway bridge. Over \$100,000 in FEMA, state and local funds were spent at this location and the new lines are protected from future floodwaters. A 24 inch water main crossing the Colorado River near 9th street was destroyed. The original water line was constructed in 1969 across the Colorado River.

The line was encased in concrete under the river channels, however, at Watson Island the water line was not encased. During 1984, the Colorado River overtopped Watson Island destroying a major portion of the water line and disrupting service to an area south of the river. Over \$140,000 in FEMA, state and local funds were expended in replacing the water line and encasing the entire length with concrete.

Grand Valley Rural Power Lines - Flooding along Roan Creek, Clear Creek, and the Colorado River caused distribution lines in various locations to be washed away. Grand Valley Electric relocated many of the replacement lines to prevent future damages.

Mesa Water and Sanitation District - Near the Town of Mesa, Mesa Creek swollen with spring snowmelt runoff, caused erosion damage to a section of the levee protecting the sewage treatment lagoons. A section of eight-inch drain pipe was also destroyed. District officials restored the dike and pipe to their pre-disaster condition.

Ute Water Conservancy District - In early May, mountain snow courses above Plateau Creek had stored abnormally large accumulations of snowpack. Early high temperatures caused spring flooding along Plateau Creek.

The District's 24 and 48 inch water mains located within Plateau Canyon along Colorado Highway 65, which provide water to the Grand Junction area,



were in severe danger. The District's experience in 1983 with flooding and resulting water main breaks prompted officials to contract with Parkerson Construction of Grand Junction to construct dikes and rip-rap protection of water mains within the canyon.



Photo 10. Levee Protecting Ute Water Conservancy District's Water Line in Plateau Creek Canyon.

Parkerson opened up a borrow pit and ultimately used over 52,000 cubic yards of fill and 5,000 cubic yards of rip-rap protecting the District's investment.

When the flooding was over, ten sites along Plateau creek had suffered damage including 200 ft. of 24 inch water main. Along the Colorado River near Rapid Creek and Interstate 70, high floodwaters entered the District's pump station causing damage to the pumps (see Mitigation Section, Chapter 8 for more details). The District expended over \$850,000

in district, state, and federal funds in preventing flood damages and restoring their facilities.

## MOFFAT COUNTY

Roads and bridges were inundated by flood and landslide incidents. Along County Road 129, the Snake River Bridge suffered the loss of one of the abutments, causing the temporary closure of the road. At County Road 51 along Wilson Creek, the embankment and roadway slipped out in five locations due to landslide action. FEMA estimated over 7,000 cubic yards would be required to restore the road (Note: this site is mentioned later in mitigation actions taken by the County). In the northeastern area of the county, the Lower Slater Creek bridge suffered the loss of both abutments due to high flows. The County replaced this bridge with an improved structure (this is also mentioned later in the mitigation section of this report).

At the Moffat County Golf Course, an emergency levee was constructed during flood-fight efforts and is credited as protecting the club house and caretaker's residence from flood waters. The golf course suffered damages to fairways and roads adjacent to the Yampa River. The golf course was constructed next to the Yampa River since this use, in the past, has been considered good use of floodplain land. It is noted however, golf courses and parks throughout this disaster area have proven very expensive

to restore or replace.

**Craig** - At the city's sewage treatment plant the Yampa River washed away a 30 inch sewage out-fall line and a four inch sludge line. A sewage out-fall line, which was buried and crossed the Yampa River, was not encased in concrete and protected at each bank of the river.



**Photo 11. High Water Along Fortification Creek in Craig Threatens the Middle School Building.**

The new line is encased in concrete at a cost of \$120,000. At the municipal water treatment plant, the Yampa River changed course and deposited a sand bar at the raw water intake. A sand bar caused the secondary raw water intake structure to fail. During repairs by the City, the Yampa River was diverted back to the structure using rip-rap jetties and the sand bars removed at a cost of over \$80,000.

### Yampa Valley Electric

**Co-Op** - Oak Creek flooded and resulted in the washout of the Keystone Substation due to the failure of a culvert. A new substation was installed and the culvert relocated to prevent future damages. Power poles and associated electric equipment were destroyed throughout the Yampa Valley Electric's area. At all repair sites, the restoration incorporated such measures as required to mitigate future occurrence.

### **MONTROSE COUNTY**

County road crews were busy in many locations due to the heavy runoff of the streams. Near the Ironstone Irrigation headgate, the Uncompahgre River scoured over 220 ft. of river bank to a depth of 12 ft. Road crews were able to save the headgates with rip-rap protection. Near the Calamity Road Bridge over the San Miguel River, road crews waged a successful flood fight battle installing rip-rap to save the bridge.

The Montrose-Delta Irrigation Canal headgates on the Uncompahgre River were endangered also, however, county crews were able to install emergency bank protection and saved the facility. The loss of this facility would have caused long term effects on agricultural producers.

Along Beaton Creek on the Buckhorn Lakes road, intense rainstorms washed out two major culvert bridges. County crews

attempted to replace the culverts for local traffic, only to have them washed away.



Photo 12. Beaton Creek Bridge in Montrose County.

Road and Bridge Department crews replaced the bridges with steel bridges that will pass the 25-year flood frequency. FEMA inspectors allowed \$12,000 for repairs, however, the County spent \$30,000 in the replacement of the two bridges.

City of Montrose - The spring runoff from the mountains caused the Uncompahgre River to overtop its banks within the City. City crews constructed emergency levees to protect Ute Park and the main sewage line to the new sewage treatment plant. The City was successful in protecting the new plant and the park, saving thousands of dollars in repairs to the facilities. Although the flood fight effort cost in excess of \$35,000, everyone has agreed the money was well spent.

### Montrose Recreation

District - The Uncompahgre River overflowed its banks near Ute Park in the City of Montrose. The District constructed a 400 ft. levee to protect the park, spending over \$20,000 in their flood fighting effort. This effort saved the park from damage. In an unprecedented move, the District hired a local engineering company to manage their flood fighting efforts. The District explained their lack of expertise and qualifications for their actions. The engineering firm had experience in design, construction, and a knowledge of where to obtain machinery, manpower and material.

Naturita - The Town's water treatment plant located on the San Miguel River suffered the loss of over 2,000 cubic yards of rip-rap material at the raw water intake facility. A large number of auto tires cabled together for bank protection upstream of the plant broke loose during the flood causing the San Miguel River to divert towards the facility, resulting in the loss of the rip-rap. In reconstructing the bank the tires were removed and suitable rip-rap placed.

Olathe - The Uncompahgre River caused damage to the Church Street bridge when the river overflowed on the upstream side of the bridge. A six inch water line located on the upstream underside of the bridge was lost. At the Colorado Highway 348 bridge, extensive erosion occurred on both approaches to the bridge. A two-inch and four-inch gas

main and a six inch water line also located on the upstream underside of the bridge were damaged by the high water and debris at the bridge.

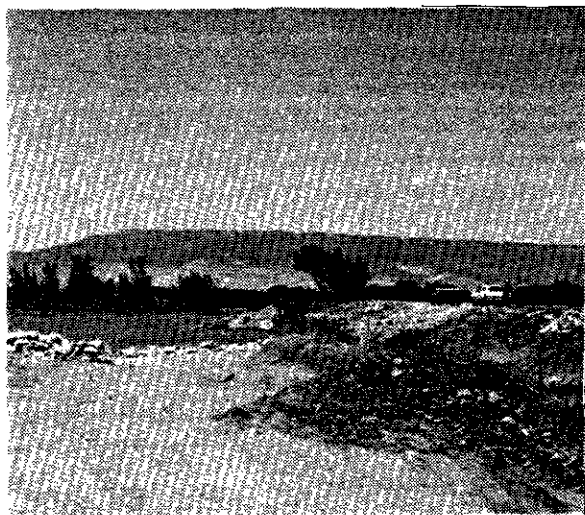


Photo 13. Olathe Sewage Lagoon Bank Protection Provided by Colorado Highway Department During Flood Fight.

The bank erosion was so severe a home nearly fell into the river. The town received assistance from the Colorado Highway Department in flood fighting measures to protect the Town's sewage lagoons. At the E-Bar-J Trailer Court, rip-rap was placed on the east bank south of the 348 Bridge, thereby preventing at least one trailer from falling into the river.

Project 7 Water Authority - The Authority, under an agreement with Chipeta Water Company, completed the repairs to the six inch water line crossing the Uncompahgre River. The new ductile iron pipe was encased

in concrete for future protection at a cost of over \$33,000.

Chipeta Water Company - High water from the Uncompahgre River washed away a six inch water main crossing the river in late May. The Company installed a temporary line until a new line could be buried deeper in the stream bed. The Project 7 Water Authority completed the repairs for the Company as mentioned above.

## OURAY COUNTY

Anticipating high floodwaters, County road crews constructed a 1,000 ft. levee to protect Highway 23 from floodwaters of the Uncompahgre River. Along Highway 23 near Coal Creek, a levee was constructed to protect the embankment and roadway from erosion. Heavy flood flows over the shoulder of Engineer Pass Road closed the road for an extended period. A new road shelf was constructed by blasting into the side of the mountain. Landslides covered County Road 17 in numerous places during spring runoff creating access problems for residents.

Ouray - During early May of 1984, the City was already receiving reports of possible high floodwaters due to the abnormal heavy snowpack in the mountains above the city. The City decided to prepare for the worst scenario by increasing the capacity of Cascade Creek and the Uncompahgre River. Over 3,000 cubic yards of rock and gravel were removed from

Cascade Creek and deposited on the stream banks for future protection. Along the Uncompahgre channel, material removed from the channel was used to construct jetties to protect stream banks and improved facilities. The City's efforts, although costing more than \$35,000, saved thousands of dollars in damages to public and private property.

## PITKIN COUNTY

County crews assisted in flood emergency operations by sandbagging the Aspen Art Museum and Hunter Creek Trail. The Brush Creek Subdivision near Snowmass Village suffered damage to roads from landslides and slump-outs.

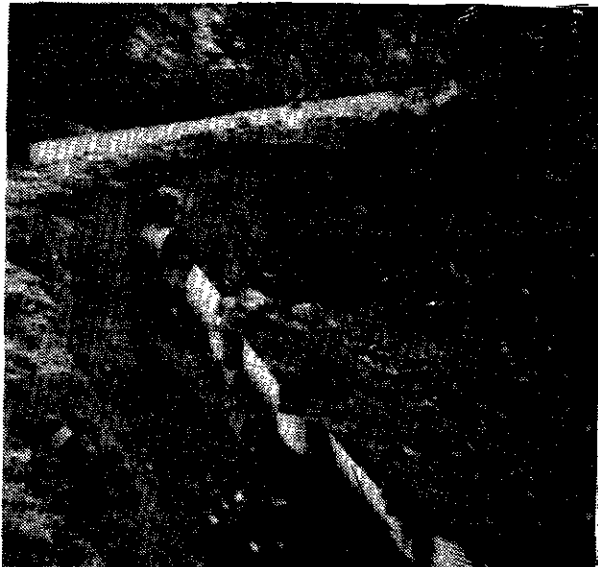


Photo 14. Destroyed Culvert and Roadbed on Frying Pan Road in Pitkin County.

Frying Pan Road suffered damage when landslides inundated portions of the road. A landslide near the airport business district covered the access road into the

Consolidated Sanitation District's settling ponds.

Near Horseshoe Bend on Frying Pan Road, the downhill slope of the roadway slumped out. A 30 inch culvert was destroyed and a major portion of roadbed slumped out (see Photo 14). The Roaring Fork River undercut the roadway of the Lower River Road causing closure of the road. FEMA authorized the construction of a \$161,000 bin wall to stabilize and protect the roadway from future flood damage. The south abutment of the Emma Bridge over the Roaring Fork River was damaged by floodwaters.

Aspen - Damage occurred to the Hopkins Street foot bridge when the Roaring Fork River eroded the river bank near the bridge. Repair work included elevating the bridge and replacement of a permanent support pier. Near the Aspen Visual Arts building, an auto was washed into the Roaring Fork River causing the river to be diverted towards the structure. A landslide, located above the City, threatened the Aspen Art Museum. Consulting geologists advised the excavation of emergency de-watering trenches at the landslide site. These trenches were credited in mitigating damage to the museum.

Snowmass Village - Three public pedestrian bridges were destroyed by spring floodwaters along Brush Creek. Flooding along Brush Creek also destroyed portions of a public bike/foot path. Over 8,000 cubic yards of material was required to protect the

facilities.

**Snowmass Water and Sanitation District** - Brush Creek overflowed its banks carrying debris downstream, destroying sewer lines, water lines and depositing debris into the sewage treatment plant clarifiers and sediment tanks. Near Wood Road along Brush Creek, over 600 ft. of sewer line located within the stream bed was destroyed. The replacement sewer lines were relocated out of the stream bed and all stream crossings were encased in concrete to mitigate future damages. A landslide destroyed over eight hundred ft. of a raw water line. The replacement water line was relocated in stable soil to prevent future damage.

### **RIO BLANCO COUNTY**

Snowmelt and resulting runoff caused road embankments to wash out in five locations along County Road 7. A bridge over the Williams Fork River along County Road 121 was washed away. A replacement bridge passing the 25-year flood frequency was constructed at the damage site. Since the County had not adopted State bridge standards, FEMA limited replacement bridge dollars to original bridge dimensions. A bridge over East Douglas Creek collapsed and was washed away. A replacement bridge passing the 100-year flood frequency was constructed at the site. FEMA allowed \$33,651 for the bridge; however, the County spent over \$42,000. County officials are confident that the new bridges, as

constructed, will not fail in future flood events.

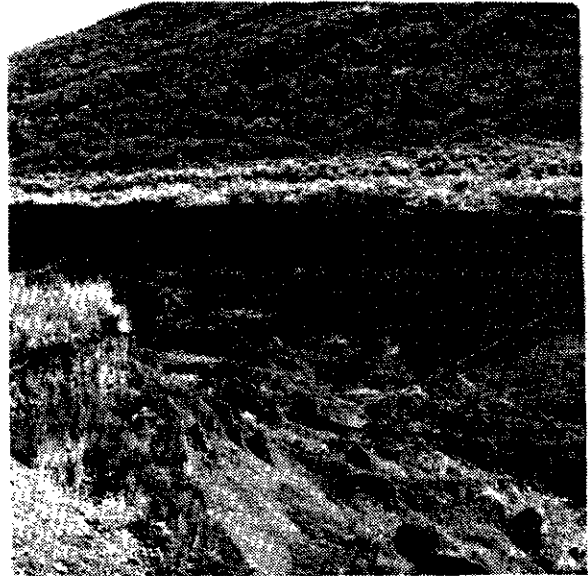


Photo 15. White River Electric Power Lines Damaged by a Landslide Along Wilson Creek in Rio Blanco County.

**White River Electric Co-Op Association** - Utility lines along Wilson Creek and County Road 51 in Moffat County were downed by landslide activity. The Co-Op elected to reroute the power lines out of the landslide area. Co-Op officials spent the next year obtaining easements and right-of-way for the relocation only to have the new area become victim to slides. Officials finally abandoned the utility line until the slide area stabilizes. Although FEMA authorized over \$47,000 in repair and relocation costs, the Co-Op spent less than \$3,500 in emergency costs by abandoning the relocation efforts. Problems within this slide area will occur again in the near future (see Moffat County this section).

## ROUTT COUNTY

Landslides and flooding impacted the County causing road and bridge damage. Along County Road 55 at Dunkley Pass, a large uphill land mass movement shifted the road over 25 ft. horizontally and 15 ft. vertically. County road crews were able to stabilize the road at a cost of over \$25,000. Along County Road 52 at Wolf Creek, high flows washed away portions of roadbed. Landslides along County Road 27 North of Oak Creek closed portions of the road for extended periods. Along County Road 54, two and one half miles from Road 129, extensive land movement occurred. A 400 ft. section of roadway shifted twenty ft. horizontally and six ft. vertically closing the access until road crews could stabilize the road.

At County Road 129 over the Snake River, a 90 ft. long bridge was destroyed. FEMA damage inspectors authorized replacement with a new bridge at the site estimated at \$205,000 (of which Routt County's share would have been \$ 31,000). County officials, citing lack of funds, elected not to replace the bridge.

Hayden - High floodwaters in Dry Creek washed out the roadway approach to the Third Street Bridge. The bridge approach was replaced and heavy rip-rap was installed to prevent future erosion. High floodwaters in the Yampa River destroyed portions of the access road into the Town's water treatment plant. Town

crews replaced over 235 cubic yards of rip-rap to protect the road.

Oak Creek - Spring snowmelt transformed Oak Creek into a raging torrent, destroying the town's raw water source, sewer lines, culverts and damaging the town's park facilities (see Photo 16).



Photo 16. Flooding in Oak Creek Downtown Area.

The town was without water for emergency fire use and drinking water for several days. The Coors Brewery, in Golden, delivered packaged drinking water in quart beer bottles to town residents. Flood damages to the Town exceeded a quarter of a million dollars. An emergency water system was installed and used while the raw water system was under construction. The Governor's Emergency Contingency Fund and Department of Local Affairs provided financial assistance to the Town for the rebuilding

of the water system (mentioned later in Mitigation Section).

Volunteers cleaned the town park and assisted business owners in their clean-up. The town lacked the capability to design, inspect or construct the new facilities and relied solely upon consulting engineers for assistance.

Steamboat Springs - A landslide inundated a cul-de-sac on Laurel Lane. The slide deposited over 2,000 cubic yards of material which had to be removed. In downtown Steamboat Springs, city crews used over ten thousand sand bags in a flood-fighting effort along the banks of the Yampa River. A landslide at the Howelsen Hill ski complex destroyed a poma tower, a snow-making machine pedestal, and underground electrical lines. The Burgess Creek Road suffered surface damage from slides. The City spent over \$65,000 constructing two concrete retaining walls along the sides of the road to mitigate future landslide problems at this site. The City's action at this site was an improvement and did not qualify for FEMA or State funding.

### SAGUACHE COUNTY

Abnormal snow depths and early spring melt caused Saguache Creek to overflow its banks causing the majority of damage within the County. Damages within the County occurred as flood debris filled culverts causing high flows to overtop roadways. A dragline was used in Saguache Creek three miles

South of Saguache in an effort to open the channel and prevent damage to a private residence and County Road X. The County's hot mix plant was flooded resulting in the need to haul hot mix for spring road repairs from Del Norte.

Bonanza - This small rural community was heavily impacted by Spring floodwaters. With a very limited budget, town officials were faced with the replacement of a major access bridge. Kerber Creek washed out a large culvert under the main north-south road through town. County road crews assisted the Town in the replacement of the new bridge structure.

### SAN MIGUEL COUNTY

High floodwaters in Fall Creek downed trees and inundated roadways making travel along County Road M44 nearly impossible. Floodwaters in Bear Creek destroyed trees, caused log jams, and destroyed bank protection. A beaver pond dam located above forest access road 625 breached sending water flowing at super critical velocities down the steep hillside, destroying portions of the road. Along Specie Creek Road 44, Specie Creek caused heavy damage to the road and bridge structures in seven locations totaling over \$66,000. A large landslide above Haskell Hill Road inundated the roadway, stopping traffic for extended periods.



## STATE OF COLORADO AGENCIES

Department of Highways - State Highway 187 Bridge over North Fork of the Gunnison River suffered damage from floodwaters. Heavy rip-rap was lost at the left abutment when debris accumulated on the three bridge pier supports. Over \$53,000 in federal and state funds were expended in repairs of the bridge. Other federal aid system road and bridge damage occurred which was addressed under Federal Highway Administration emergency programs.

Division of Parks - Near Palisade, the Island Acres State Park was inundated by floodwaters of the Colorado River. Floodwaters breached an existing levee, depositing silt, sand, and gravel, and destroying sprinkler systems and flooding septic tanks. The park suffered over \$100,000 in damages from the flooding event.

Department of Public Safety - Expenditures from the Governor's Emergency Contingency Fund and State emergency supplies issued in support of local jurisdictions during the emergency phase of the disaster were partially reimbursed by FEMA. Included in these activities was the hiring of a retired State employee to provide liaison between the Corps of Engineers and flood threatened western slope communities. The State was requested to provide geological technical assistance to both Vail and Aspen to assist these communities in determining the

level of threat posed by landslides. The State Department of Highways provided technical or resource assistance on road and bridge matters. A grant issued as a supplement to a grant from the State Emergency Water and Sewer Fund assisted in providing restoration of the Town of Oak Creek's water supply system on an emergency basis. Over 101,000 sand bags were purchased by the State and consumed by local governments during the flood fight period at a cost of over \$33,000.

Division of Wildlife - High floodwaters of the Gunnison River washed out over 1,500 ft. of protective levee allowing overland flooding at the Escalante Wildlife area. Flooding at the facility destroyed over \$157,000 in fish habitat, water control facilities, roads and support equipment. The Walker Wildlife Area near Grand Junction suffered damage from high floodwaters of the Colorado River. Rock jetties protecting the north bank of the area were destroyed and required replacement. A levee protecting the area was also destroyed. State wildlife officials used Corn Construction to reconstruct the levee at a cost of over \$850,000; rather than seek FEMA funding. These services were in repayment of a fine levied by the courts. At the Pitkin Fish Hatchery near Pitkin, Quartz Creek destroyed a diversion and intake structure. At the Roaring Judy Hatchery, high flows in the Gunnison River destroyed portions of a levee and rip-rap protection.

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**CHAPTER 3**  
**PREPAREDNESS ACTIVITIES**  
**AND EMERGENCY OPERATIONS**

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## CHAPTER 3 - PREPAREDNESS ACTIVITIES AND EMERGENCY OPERATIONS

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### LOCAL ACTIVITIES

In early February of 1984, DODES planners were already conducting flood preparation meetings with Grand Junction and Mesa County officials in anticipation of 1984's spring flooding. Mesa County was recovering from the high flood waters of 1983 along the Colorado River. Potential flood mitigation discussions centered on the removal of vegetation on three islands along the Colorado River to facilitate potential flood flows.

Near the Riverside area, reinforcing the existing dike was discussed, since this area had suffered damage in 1983. Mesa County and Grand Junction officials agreed on establishing a central clearinghouse for information and official flood actions. The County contracted with an engineering firm to study the county's flood problem and provide officials with flood mitigation guidance.

County officials in a letter to then Governor Richard D. Lamm, revealed that over two and one-half million dollars in damages resulted from the 1983 flooding in Mesa County. The County requested equipment and

technical assistance from the Colorado Department of Highways in preparation for the 1984 spring flood season.

On March 6, 1984, the Governor provided all that remained of his 1983 emergency contingency fund (\$53,000) to Mesa and Clear Creek Counties to assist with their 1983 flood costs. These funds were to help offset the costs of flood fighting during 1983. Both Mesa and Clear Creek counties outlined plans to undertake work which would reduce the impact of the high flood waters anticipated again in the spring of 1984.

### STATE ACTIVITIES

#### COLORADO DIVISION OF DISASTER EMERGENCY SERVICES (DODES)

During March of 1984, a Potential Flood Threat Questionnaire (see Appendix A) was mailed to target communities, requesting the communities evaluation of those specific areas within their jurisdiction which they felt might be a problem during the Spring runoff period. The questionnaire also included questions on the emergency preparedness activities being undertaken by the community and

the number of sandbags available for use. In response, Fort Collins reported the newly formed Flood Task Force had developed a public education program with articles appearing in the local newspaper. The Town of Pagosa Springs reported they were reviewing the Town's Emergency Flood Plan. Jefferson County reported a flash flood exercise would be conducted in early May.

On April 12, 1984, a variety of state, local and federal agencies and private organizations met at the Division of Disaster Emergency Services (DODES) in Golden, Colorado to discuss potential spring flooding. During the meeting, a number of rivers and streams in Colorado were identified as having a medium to high flood threat. The upper and middle regions of the Colorado River were identified as having a medium threat, while the lower Colorado and the Uncompahgre Rivers were identified as having a high flood threat.

During the last two weeks of April, heavy snowfall with a high moisture content was reported in several areas of the state. The flood potential was augmented with temperatures over 70 degrees F. for several days. As a result, the areas effected by the flows of the Colorado and Uncompahgre Rivers faced substantial flood problems. County commissioners from Delta and Montrose Counties reported that by April 18 and 19, 1984, the Uncompahgre River had already reached its highest level of 1983-84.

On April 30, 1984, Governor Lamm, in a letter to the Sacramento Corps of Engineers, requested Corps advance measures under Public Law 99 for Mesa, Delta, and Garfield Counties and the communities of Ridgway, Montrose, Olathe and several other communities along the Uncompahgre River.

On May 9, 1984, the Division hosted a second meeting of federal and state agencies to reassess the April 12th estimate of the potential flood threat in the state during the Spring runoff period. The average depth of snowpack across the state increased during April due to above average snowfall and lower than normal temperatures. The flood threat was assessed as high for twelve rivers and creeks as follows:

- o Blue River in Summit County
- o Crystal River in Gunnison and Garfield Counties
- o Upper Region of the Colorado River in Gunnison and Garfield Counties
- o Uncompahgre River in Ouray, Montrose and Delta Counties
- o Arkansas River in Chaffee, Fremont and Pueblo Counties
- o Cottonwood Creek and Chalk Creek in Chaffee County
- o Poncha Creek in Fremont County
- o Saguache Creek in Saguache County

## o Clear Creek in Clear Creek County

News releases were issued to inform the public of the threat of spring flooding, cautioning citizens to be alert to flash flood watches and warnings when issued by the National Weather Service.

During the 9th of May meeting, it was brought to the Division's attention that the last snow course survey is taken on the 15th of May during normal years. Because of the late snowpack accumulation, cold temperatures and the concern over the significant flood threat, the snow courses would be read again on the 1st of June by SCS. Representatives of the National Weather Service, Sacramento Corps of Engineers, Colorado Water Conservation Board, Department of Natural Resources and the Division agreed the additional information would be invaluable. The Division requested the State Conservationist take the 1 June readings.

The additional data assisted the state immensely in monitoring and evaluating the spring runoff, and provided a historical data base of what occurs during the melting sequence of the high elevation snowpack during abnormal weather years.

By the 15th of May, high flows had caused Oak Creek's and Silt's water supply system failures, resulting in health and sanitation problems. In Garfield County, two workers were killed while attempting to

repair a natural gas line damaged by landslides. One Mesa County employee was swept from a bridge deck by floodwaters while trying to save the bridge. A landslide in Vail caused the evacuation of 70 persons. Several counties were involved in floodfight activities, expending considerable resources. Local Emergency Declarations were made by Delta, Montrose, Routt, Moffat, and Mesa Counties.

On May 15th, Pat Byrne, DODES Director, issued the first of five Disaster Situation Reports to the Federal Emergency Management Agency Regional Office in Lakewood, Colorado. The DODES Director also advised the Governor through Situation Reports on a daily basis as to the status of emergency operations underway throughout the state.

On May 15, 1984, Governor Lamm requested advance measures from the Albuquerque Corps of Engineers under Public Law 99 for Costilla, Saguache, Fremont, and Chaffee Counties in anticipation of potential flooding problems.

DODES, in Disaster Situation Report No. 2 to FEMA, reported the addition of Montrose County as a local declared emergency. The report centered on the physical impacts of the disaster and the fact that local governments were rapidly expending their road and bridge department budgets along with whatever contingency funds they had.



**Photo 17. Helicopter Provided by the Corps of Engineers Under PL 99 to Assist in Flood Fight Activities at Silt's Water Treatment Plant.**

The Governor issued a State Disaster Emergency Declaration specifically for the Town of Silt's threatened water treatment facility in order to make state and federal (Corps of Engineers) assistance available.

On May 24, 1984, Disaster Situation Report No. 3 was issued to the FEMA Regional Office in Denver. This report stated that the most heavily impacted counties at that time were Montrose, Delta, and Moffat. The Governor issued State Disaster Emergency Declarations for Delta, Montrose, Mesa and Routt Counties in order to facilitate providing state resources as well as requesting Corps of Engineers assistance for flood fighting. The Corps was at the time involved in a flood fight at Silt attempting to save the town's water treatment plant.

The Albuquerque Corps of Engineers District expressed concern that Terrace and Rio Grande reservoirs were spilling over the emergency spillways and offered their assistance if required.

On May 25th, the National Weather Service, Denver, issued Flood Warnings in effect until midnight Saturday the 26th of May along the Colorado, Gunnison, Eagle, Uncompahgre, North Fork of the Gunnison, Yampa, East, and Arkansas Rivers. Flood warnings were also issued for Saguache and Poncha Creeks. The Weather Service upgraded from a "Watch" category to a "Warning" category because of increasing river levels which were assuming dangerous proportions in some areas.

Disaster Situation Report No. 4 was issued to FEMA advising that flood fighting efforts were ongoing in the Western Slope drainage basins of the Gunnison, Uncompahgre,

Colorado, and Yampa rivers and in some other areas. The Sacramento Corps of Engineers arrived in Grand Junction and established a field office for emergency operations.

On May 29th, a meeting was conducted for state and federal agencies at the State Emergency Operations Center due to the potential flood threat and the long holiday weekend. Information was exchanged on flood potential and emergency response activities to date. The Emergency Operations Center at Golden remained open each day over the weekend in anticipation of potential flood impacts. The heavy use of recreational facilities over the holiday caused the state and local governments considerable concern. In some areas recreational area uses were curtailed or placed under severe restrictions.

During the first week of June, the DODES Director, requested that the Colorado Geological Survey investigate the threat of mudflows, landslides, and other related impacts likely to cause damage in the state.

**"Our computerized SNOTEL sites indicate 75 to 100 percent of the snowpack below 10,000 feet has melted, however, 50 to 75 percent of the snowpack still remains above the 10,000 feet elevation"**

**Sheldon Boone, State  
Conservationist**

On June 1st, the U.S. Soil Conservation Service (SCS) State Conservationist, Sheldon G. Boone, reported that the high volume of runoff already experienced was the result of melting low to mid level snowpacks. The high elevation snow normally produces peak stream flows.

On June 5th, the DODES Director, in a letter to effected counties, requested assistance in gathering damage assessment information and comments on the local emergency response activities (see Damage Assessment Section).

By the 5th of June, the spring runoff threat had subsided for a time with a cooling trend which caused streamflows to gradually fall. The National Weather Service indicated that the cool weather would last for at least five days, giving a much needed rest to floodfight crews throughout the state. The Sacramento Corps of Engineers closed out their floodfighting efforts on the morning of the 4th of June. The Governor granted \$25,000 from his emergency fund to the Town of Oak Creek for their destroyed water system. The Colorado Department of Local Affairs also assisted the town with emergency funds. The funds were used to get the town's water system back on line on an emergency basis. Landslides continued to occur in the Town of Vail threatening additional improved property.

By the second week of June, initial efforts were already underway to seek long term solutions to some of the most

critical flood problems. As the floodwaters receded to a reasonable level, repair and restoration of damaged public facilities by local governments began.

On June 12th, the Colorado State Emergency Board met at the ASCS office in Denver to discuss farm and crop damage assessment. This meeting was in response to the Governor's and DODES requests to local jurisdictions to prepare Damage Assessment Reports (DAR's) (see Preliminary Damage Assessment, Chapter 4).

As the preliminary damage assessments began arriving at the Colorado Emergency Operations Center, it became apparent that flood damages were exceeding the financial capacity of state and local governments (see Preliminary Damage Assessment, Chapter 4).

On June 11th, DODES Director, Pat Byrne, in a memorandum to Governor Lamm, requested consideration for a Presidential Disaster Declaration. This request was based on efforts and data compiled by the joint federal-state damage assessment team. Governor Lamm agreed with the DODES recommendation and requested a Presidential Disaster Declaration on June 11, 1984.

On June 27th, then President Ronald Reagan declared ten western Colorado counties disaster areas as a result of flooding, and landslides. The counties of Delta, Garfield, Gunnison, Mesa, Ouray, Pitkin, Rio Blanco, Routt, and San

Miguel were eligible for public assistance to help restore damaged public facilities. Additional counties were added as the damage assessment continued. These were Dolores, Eagle, Hinsdale, Montrose, and Saguache Counties.

#### **COLORADO WATER CONSERVATION BOARD (CWCB)**

The Colorado Water Conservation Board (CWCB) prepared a Spring 1984 Flood Threat Outlook. Their analysis was based on the Soil Conservation Service (SCS) "Advanced Snow Survey Information" dated April 1, 1984 and the CWCB's knowledge of community flood problem areas. CWCB stated that snowmelt events are the result of three climatic parameters: snowpack, temperature, and timing.

**Snowpack** - When an average basin snowpack exceeds 150% of the recorded average, concern should be stressed regarding flood potential. When the snowpack exceeds 200% of the recorded average, downstream community officials should begin advance mitigation measures.

**Temperature** - From CWCB's past experience in the monitoring of snowpacks and their resultant runoffs, high water occurs within a basin following an extended warm temperature trend of 5-7 days without freezing in the snowfields above elevation 10,000 ft. M.S.L.

**Timing** - A late season runoff -- mid May through June -- with



snowpacks above 150% increases the flooding potential.

CWCB, in cooperation with DODES, gathered information and data from NOAA, USGS, SCS, and the State Engineer's Office regarding runoff parameters and interpreted the flood risks to specific communities or sites.

CWCB, in their report, stated the snowpack of the watershed of the Uncompahgre River was above average with the Iron ton gauge reading approaching 200% of average. CWCB predicted that streams within the basin would experience flood problems and named Ridgway, Montrose, Olathe, and Delta as critical locations.

CWCB representatives assisted the Corps of Engineers, DODES, and others in preliminary damage assessment and technical assistance to communities during the emergency floodfight activities.

#### **DEPARTMENT OF HEALTH**

Health departmental field representatives were involved with water quality problems at Silt, Oak Creek, Paonia, Delta and a number of other communities. The Department assisted DODES emergency operations center representatives in evaluating damage reports from effected communities.

#### **COLORADO GEOLOGICAL SURVEY**

The Geological Survey (CGS) responded to floodplain and geologic hazards during the emergency operations period of

the disaster. DODES requested CGS to evaluate the landslides at Vail and Aspen and provide guidance for local officials. CGS assisted the Town of Red Cliff in evaluating the potential landslides impacting the Town and provided a planning analysis, which proved invaluable as Red Cliff began to plan for mitigating the effects of landslides.

#### **STATE HIGHWAY DEPARTMENT**

Highway Department crews assisted with heavy equipment in the Town of Olathe to protect a sewer treatment plant. At Olathe, crews were credited with saving the town from floodwaters that threatened residents. They also worked alongside county crews in several areas in addition to working on the State highway system.

#### **DEPARTMENT OF LOCAL AFFAIRS (DOLA)**

DODES notified the Department of Local Affairs (DOLA) of the potential spring flood threat and the impact on local government utilities. DODES recommended that DOLA review and identify those water and sewer utilities that might require emergency financial assistance from the State Emergency Water and Sewer Fund. DOLA, as a result of the flooding, issued emergency grants totaling over \$80,000 to the communities of Oak Creek, Delta, Olathe, Silt, Naturita, and Montrose County for repairs to damaged equipment and utility lines.

## **FEDERAL ASSISTANCE**

### **CORPS OF ENGINEERS**

In answer to the Governor's request for assistance, the Sacramento District Corps of Engineers provided emergency floodfight assistance to various local governments along the west slope of the Rockies. The Corps operated out of an office in Grand Junction and provided assistance to the following communities:

**Silt** - Provided 900 tons of sand for sandbags and helicopter service to transport 40,000 sandbags to protect the water treatment plant.

**Delta** - Corps representatives contracted with local contractors to construct over 600 ft. of an emergency flood protection levee to save town property.

**Olathe** - Local contractors, under the supervision and by contract with the Corps, constructed over 700 ft. of emergency protective levees to prevent floodwaters of the Uncompahgre River from destroying portions of town.

**Gunnison** - The Corps provided 900 tons of sand to fill over 20,000 sandbags that were furnished by both the State and the Corps. The sandbags were used to protect residential areas at Dos Rios Unit Number three, Tomichi condos and the Town of Crested Butte. Over 300 tons of rip-rap were placed to protect a county bridge over Tomichi Creek serving 45

families.

**Grand Junction** - An emergency operations field office was set up in their Grand Junction office for floodfight activities. The Corps also provided over 100,000 sandbags to Grand Junction for use in the area. Corps representatives also provided engineering assistance to six other communities.

### **FEDERAL EMERGENCY MANAGEMENT AGENCY**

The Federal Emergency Management Agency (FEMA) is the federal coordinating agency for emergency response, disaster relief funding, and hazard mitigation planning. Although FEMA was not directly involved in the emergency operations of the state, they were monitoring conditions through Situation Reports furnished by DODES. Following the presidential disaster declaration, FEMA took the lead in coordinating federal funding for state and local needs.

### **U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE (SCS)**

The SCS administers the cooperative snow survey program in cooperation with other federal, state and local agencies, as well as private organizations and individuals. SCS publishes a monthly accounting of snowpack values and basin water contents. These monthly reports are available December 31 through May 30 each

snowmelt season. This information is gathered from SNOTEL and manual reporting stations throughout the state. The SCS was invaluable during the 1984 runoff season in predicting when runoff would occur.

As the runoff season closed, the SCS was busy implementing their Resource Conservation and Development Program for the Town of Paonia and their sewage treatment plant that suffered damage as a result of flooding. SCS provided monetary assistance to construct levee protection for the facility.

#### **NATIONAL WEATHER SERVICE**

The National Weather Service is responsible for weather forecasting and issuing severe weather warnings and watches, flash flood warnings and watches, and flood warnings. The Service participated in DODES flood alert meetings, providing weather forecasts on long range temperature, precipitation, and stream flow information. As the flood runoff and flood fight season began, the Service provided weather alerts to news services and the State EOC, as well as streamflow data from the River Forecast Centers.

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**CHAPTER 4**  
**PRELIMINARY DAMAGE**  
**ASSESSMENT**

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## CHAPTER 4 - PRELIMINARY DAMAGE ASSESSMENT

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Early spring flood meetings conducted at the DODES EOC instructed local jurisdictions when and how to report disaster damages. However, as counties became more involved in floodfighting activities, damage information of a detailed nature became more difficult, if not impossible, to obtain. A number of methods were implemented to obtain damage information, such as telephone contacts and the Colorado Crime Information Center (CCIC) computer link to local sheriffs and police departments. The actual floodfight activities were taking place during the middle to last week of May. DODES EOC personnel were attempting to coordinate emergency support activities and at the same time assemble damage estimates.

On June 5th, the DODES Director in a memorandum to local emergency management directors and elected officials, requested a detailed damage assessment of flood damages. The local government assessment was to include the physical damages caused by flooding, landslides and mudslides, and was to be sorted by the following categories:

- o Roads and Bridges
- o Agriculture
- o Private Businesses
- o Water and Sewer Systems
- o Water Control Facilities
- o Other Utilities

additional information as to

extent of damage and dollar estimates on emergency expenses incurred by the local governments was also requested. The DODES Director suggested that County Agricultural Emergency Boards should be used to perform agricultural damage assessment. Local Red Cross Chapters provided assistance in estimating damage to private residences.

DODES requested that local jurisdictions provide a letter of request for State Financial Aid as a preliminary step to receiving financial assistance in restoring their facilities. The DODES Director also dispatched one staff member and one temporary hire professional to the flood damage area to assess the situation. The duo met with the Corps of Engineers in Grand Junction and observed the sandbagging operation at Silt's water treatment plant. Following inspections at Gunnison, Grand Junction, Hotchkiss, Delta, and Olathe, the team returned to the DODES EOC and briefed the director on flooding conditions and damages.

By June 6th, major streamflows around the state were lower and the floodfight activities were tapering off. It was apparent to DODES that damage estimates received to date did not fully describe the impact of the spring flooding. Also, it was unknown whether or not the damages were within the capacity of local and state

government without federal assistance.

### **COLORADO STATE EMERGENCY BOARD (CSEB) (USDA)**

On June 6th, the Colorado State Emergency Board (CSEB), requested Damage Assessment Reports (DAR's) pertaining to livestock, farm dwellings, and crops be prepared and submitted by County Emergency Boards (CEB's) for the effected counties. This request by the CSEB was in response to a request from the Governor and DODES for additional damage information pertaining to farm fields and homes, farm reservoirs, fences, roads, and irrigation systems.

Delta County Emergency Board - Reported six farm service buildings destroyed and major damage to eighty farms. Losses included over five miles of fences and severe damage to irrigation systems.

Garfield-Eagle-Pitkin-County Emergency Board - Reported damage to irrigation systems, fences, farm structures, bridges, and pasture land as a direct result of spring snow melt runoff.

Mesa County Emergency Board - Board members reported diversion structures in stream beds suffered severe damage. Ditches carrying irrigation water to farms and ranches were reported as washed away. Crop damage was reported as minimal. Farm officials stated that the possibility of not being able to divert irrigation water might cause a feed shortage.

Montrose County Emergency Board - The Cimmarron Canal, McDonald Irrigation Ditch and other structures suffered over \$500,000 in damages. One farm was destroyed and another severely damaged. Heavy snowpack prevented normal spring grazing. Broken and damaged ditches prevented spring irrigation and planting of crops. The Board reported that individual farms had suffered greater damage than the cooperatives.

Moffat County Emergency Board - Board members reported spring snowmelt runoff had caused over \$8 million dollars damage to irrigation pump sites, ditches, fences, crops, and had created significant debris problems. Crop losses reported were primarily alfalfa and grass hay which were covered with flood sediment. Crop losses included loss of the 1984 crop due to the inability to plant spring crops.

Rio Blanco County Emergency Board - Reported severe winter weather conditions had caused livestock losses from exposure to prolonged snows. Additional losses from the weakened condition of ewes, cows and their lambs and calves was reported. Flood runoff in creeks discharging into the White River washed out farm reservoirs, fences, roads and irrigation systems. On the Horlock Ranch stream runoff cut gullies through fields to a depth of over 20 ft. County ASCS officials requested Emergency Conservation Funds (ECS) for restoration of facilities.

Routt County Emergency Board - Farm officials reported heavy losses during calving and lambing season due to excessive wet weather. Headgate and irrigation facilities were destroyed including 15 miles of ditches.

San Miguel-Ouray County Emergency Board - Officials reported spring snowmelt runoff had saturated hillsides causing landslides resulting in the destruction of several irrigation ditches. Local ranchers warned officials another disaster might occur due to non-planting of spring crops if irrigation facilities were not repaired quickly. Total agricultural damage was estimated at over \$12 million throughout the fifteen western slope counties.

**PRELIMINARY  
JOINT  
FEDERAL-STATE  
DAMAGE  
ASSESSMENT**

On June 25th, the Federal-State Damage Assessment Team was formed in Grand Junction. The purpose was to conduct a Joint DODES-FEMA Region Eight damage assessment as a result of snowmelt associated damage which occurred during the period 1 May to 25 June 1984. This team action was preliminary and normally occurs when a major presidential declaration is under consideration. State disaster officials, in coordination with other state and local officials, surveyed the effected area jointly with FEMA regional disaster specialists

to determine the extent of public, private, and agricultural damage. The survey proved invaluable in determining the type and extent of federal disaster assistance required. The following organizations and agencies were involved in the preliminary damage estimates:

Federal Emergency Management Agency (FEMA)  
Colorado Division of Disaster Emergency Services (DODES)  
Department of Natural Resources  
Division of Water Resources  
Water Conservation Board (CWCB)  
State Geological Survey  
Department of Health  
Department of Highways  
Environmental Protection Agency  
Federal Highway Administration  
Corps of Engineers

Each Federal-State team was responsible for assessing damage to public and private non-profit groups. Individual assistance assessment teams were performing a separate effort concurrently. Each effected county had assigned a point of contact for the team, usually the Emergency Management Coordinator.

Preliminary Damage Assessment Site Estimate and Damage Assessment Summary Forms (FEMA Forms 90-80 and 81) were used for data collection, supported by maps, sketches, and pictures. The teams completed their assessment on June 29th and presented the results to state and federal officials.

The total preliminary damage assessment, including individual assistance, was estimated to be greater than \$29 million.

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**CHAPTER 5**  
**DECLARATION AND REQUEST**  
**FOR ASSISTANCE PROCESS**

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## **CHAPTER 5 - DISASTER DECLARATION AND REQUEST FOR ASSISTANCE PROCESS**

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### **LOCAL GOVERNMENT DECLARATIONS**

Local governments were already undergoing major financial problems when the spring flood disaster occurred. Following the floods of 1983, many local governments were under considerable stress and their money reserves were small and inelastic. As local budgets became more restricted, local ability to manage the overall environment suffered. By June, most of the fifteen western slope counties had declared a disaster for their jurisdictions and sought financial assistance from the state.

### **STATE GOVERNMENT DECLARATIONS**

On May 18th, Governor Lamm declared a state of disaster emergency for the Town of Silt in Garfield County. Similar actions followed with subsequent declarations for Mesa, Delta, Montrose, Gunnison, and Routt Counties. Execution of the State Emergency Plan was directed on May 18th and all appropriate actions directed under State Law were accomplished.

On June 11th, following review of the preliminary Federal-

State damage assessment, DODES officials presented Governor Lamm with a request package for a Presidential Major Disaster Declaration. The package included estimated recovery cost figures and identified other potential impacts to the state.

The advantage of a Presidential Declaration versus a State Declaration is that the recovery program is less costly to state and locals. Early estimates of state costs without a Presidential Declaration were \$3.7 million state and \$1.3 million local costs (total \$5 million). Without a Presidential declaration, the state would have had to limit their expenditures.

With a Presidential declaration, a more thorough recovery process could ensue, including debris clearance from rivers and streams and around bridges, which was identified as a critical need. Without a Presidential, the state would have only been financially able to address the higher priority emergency needs. Also, without a thorough recovery program and full mitigation efforts, future costs pertaining to flooding would have only been magnified. An additional advantage of federal assistance was the availability of Small Business Administration (SBA) loans to

business and private residence owners.

On July 11th, Governor Lamm requested a major disaster declaration for Colorado, under provisions of Section 301(b), Public Law 93-288, as implemented by 44CFR 205.41. The Governor, in a letter to President Reagan, stated the impacts came as a result of extensive flooding, mudslides and landslides which began on 14 May 1984, and continued through the latter part of June 1984. The request listed preliminary disaster related damages as follows:

Residential	\$ 1,774,800
Businesses	2,735,800
Agriculture	12,236,000
Public	15,727,897
<hr/>	
TOTAL	\$ 31,462,097

Preliminary estimates of the nature and extent of Federal assistance required under P.L. 93-288 were tabulated including assistance from certain federal agencies under their statutory authorities.

The Governor stated that sufficient individual disaster related losses existed within the flood area, beyond those which could have been covered by other programs, to justify the implementation of the Individual Family Grant Program (IFGP).

The Governor also requested:

- (1) The SBA personal-business-economic injury disaster loan program, and
- (2) The Emergency Conservation

Program (ECP) managed by the U.S. Department of Agricultural (USDA).

In the initial declaration document, the Governor certified that the state was unable to pay its 25 percent share of the IFG Program and requested the state's share to be advanced by the federal government (see Appendix B). The Governor requested the State's share of the Public Assistance Program be provided for in a special appropriation during the Legislative Session convened in January of 1985.

The Governor designated John P. Byrne, Director of Disaster Emergency Services as the State Coordinating Officer and Leonard A. Boulas as the Governor's Authorized Representative for the disaster.

## FEDERAL GOVERNMENT DECLARATIONS

### FEDERAL EMERGENCY MANAGEMENT AGENCY

The FEMA Region Eight office had been monitoring the developing disaster on the Western Slope. The FEMA Regional Director was in close contact with the DODES Director and with other federal agencies, such as the Army Corps of Engineers, having disaster assistance responsibilities. DODES had issued numerous Disaster Situation Reports to the FEMA Regional Director indicating problems, damages, local and state actions taken to date, and anticipated actions. The

FEMA Region Eight office was also informing the FEMA Washington National office of the situation developing on the Western Slope of Colorado.

Following the Joint Federal-State Preliminary Damage Assessment (PDA) and the Governor's request, FEMA regional disaster specialists estimated the type and extent of federal disaster assistance required. The Regional Director evaluated the damage and requirements for federal assistance and made the recommendation to the FEMA National Director who, in turn, made a recommendation to the President.

On July 27, 1984, President Ronald Reagan determined that damages resulting from flooding beginning on May 1, 1984, caused a major disaster. When the President declares a major disaster, immediate notification is made to the Governor, appropriate Members of Congress, and federal agencies. FEMA designated that Delta, Garfield, Gunnison, Mesa, Moffat, Ouray, Pitkin, Rio Blanco, Routt and San Miguel Counties were eligible for Federal public assistance. Eagle, Montrose, Dolores, Hinsdale, and Saguache Counties were added later following additional justification. Individual Assistance was not authorized under the Declaration.

The Federal Coordinating Officer (FCO) made an initial appraisal of the types of relief most urgently needed. He then coordinated all federal disaster assistance programs authorized to ensure their maximum effectiveness and took appropriate action to help affected citizens and public officials obtain the necessary assistance to which they were entitled.

The FCO established a temporary Federal-State Disaster Field Office in Grand Junction to coordinate the disaster relief and recovery effort. This office was staffed with representatives of federal and state agencies having disaster assistance responsibilities. The State Coordinating Officer (SCO), served as the primary point of contact between the Federal Coordinating Officer and state and local officials.

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**CHAPTER 6**  
**DISASTER ASSISTANCE**  
**AGREEMENTS**

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## CHAPTER 6 - DISASTER ASSISTANCE AGREEMENT

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### FEDERAL-STATE AGREEMENT

Following the President's declaration of a major disaster, a FEMA-State Agreement is prepared which prescribes the manner in which federal aid under the Disaster Relief Act of 1974 is made available. The Agreement lists the areas within the State eligible for assistance; stipulates any division of costs among federal, state, and local governments; and outlines other conditions of assistance, including an incident period officially recognized as the duration of the disaster.

On July 27, 1984, a FEMA-State Agreement was prepared for the Colorado Western Slope Disaster, designated FEMA-719-DR, under the Disaster Relief Act of 1974, Public Law 93-288, as amended, 42 USC 5121 et seq. ("the Act"), in accordance with 44 CFR 205.39.

The Agreement was signed on August 1, 1984 by Richard D. Lamm, Colorado Governor, and John D. Swanson, FEMA FCO and Federal Disaster Recovery Manager. It limited assistance to damage resulting from the major disaster which took place from May 1, 1984, through and including June 30, 1984. Individual Assistance was not authorized under this disaster

declaration. The Agreement limited assistance to the following areas:

Delta, Garfield, Gunnison, Mesa, Moffat, Ouray, Pitkin, Rio Blanco, Routt and San Miguel Counties.

Dolores, Eagle, Hinsdale, Montrose, and Saguache Counties were included following an appeal and additional damage assessment information.

Federal funds provided for Public Assistance were limited to 75 percent of the total eligible costs in the designated area. The remaining 25 percent of the non federal share was provided by the state as follows based on a state policy decision:

Zero percent for private non-profit applicants;

At least 10 percent of total eligible costs for local government applicants; and

For state applicants, the State's share would amount to 25 percent of total eligible costs.

The Agreement listed certain exhibits pertaining to audits, Advance of Funds, Letters of Credit, and reimbursements, all of which are mentioned in Chapter 11 (see Appendix C).

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**CHAPTER 7**

**DISASTER FIELD OPERATIONS**

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## CHAPTER 7 - DISASTER FIELD OPERATIONS

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### GRAND JUNCTION FIELD OFFICE

The FEMA Federal Coordinating Officer (FCO) established a Federal-State Disaster Field Office (DFO) in Grand Junction to coordinate the initial disaster relief and recovery effort of the Western Slope disaster. The office was staffed with representatives of federal and state agencies having disaster assistance responsibilities. The Office of the State Coordinating Officer (SCO) and Governor's Authorized Representative (GAR) was collocated with FEMA in the Grand Junction office. The DFO was in operation from August until late September of 1984.

### APPLICANTS BRIEFINGS

Beginning on August 2, 1984, following the President's Declaration, Applicants' Briefings were conducted jointly by DODES and FEMA officials at three locations on the Western Slope: Delta, Glenwood Springs, and Craig. The principal reasons for the applicants' briefings were to explain the federal assistance programs and related regulations, eligibility criteria, application and record-keeping procedures, and to determine what types of damages prospective applicants had incurred. Applicants were

encouraged to participate in State Hazard Mitigation Planning and to coordinate their recovery efforts with other state and federal programs in order to maximize their recovery dollars.

At the applicants' briefings two forms were distributed to the applicants:

#### Notice of Interest Form (NOI) -

The NOI form lists the various categories of repair work and is used to establish a schedule whereby federal/state officials will survey damaged facilities to determine eligibility and the amount of financial entitlement. The form was filled out at the briefing for immediate use by officials.

#### Designation of Applicant's Local Agent (DALA) -

The applicant was notified at the briefing of the requirement for the designation of an applicant's local agent before a project application could be processed. DODES recommended that the applicant appoint the county auditor, county road engineer, local Disaster Emergency Services coordinator, or other full-time county employee who should be readily available for project application signing and/or other administrative details for the entire period of the project. DODES also recommended that an alternate local agent

be designated.

## **FEDERAL-STATE DAMAGE SURVEY TEAMS**

The FCO mission assigned the following federal agencies to participate as team members in the preparation of the Damage Survey Reports (DSR's):

Corps of Engineers (COE)  
Federal Highways (FHWA)  
Environmental Protection Agency  
(EPA)

The DODES Director mission assigned state agencies to accompany federal inspectors as the process of damage assessment was accomplished. The following state agencies were involved in the damage survey process:

Colorado Water Conservation  
Board (CWCB)  
Division of Parks and Outdoor  
Recreation  
Division of Wildlife  
Department of Highways  
Department of Health

## **DAMAGE SURVEY TEAM INSPECTORS' BRIEFING**

An inspectors' briefing was conducted jointly by DODES and FEMA officials at the Grand Junction Field Office. The briefing served to organize the state-federal inspection teams, familiarize inspectors with the eligibility criteria, discuss any problem or priority area discovered at the applicants' briefing, and provided inspecting agencies with completed Notice of Interest

(NOI's) forms.

## **DAMAGE SURVEY REPORTS**

The importance of the Damage Survey Report was emphasized from the beginning to local government applicants as these reports form the basis for the determination of eligible work by FEMA.

The Damage Survey Inspectors were required to visit each damage site, review applicable records, identify the damaged facility, and describe the extent of damage in terms of its existing structural components. They defined the scope of eligible work, indicated reasonable costs of repair work, and recorded the scope of work using narrative notes, pictures and/or sketches. Quantitative measures of the work to be performed and cost estimates to show pertinent details such as labor or equipment rates, or hours of work, quantities of materials and components, etc. were obtained.

The completed DSR included a report on floodplain management, hazard mitigation, and environmental assessment, when appropriate, for each damage site. Federal, state and local inspectors made every effort to provide clear and concise DSR's.

## **PROJECT APPLICATIONS**

Following the completion of the federal-state-local Damage Survey, a DSR was submitted by the federal representative on



the survey team to FEMA's Public Assistance representative. This occurred during the field operation at Grand Junction. FEMA reviewed, corrected, indicated their approval, and packaged approved DSR's by Project Application, which were then forwarded to the state for review and approval by the Deputy GAR. The state representative prepared the Project Application (based on the approved DSR's) and delivered it to the applicant.

### **RECOVERY MANAGEMENT STAFF**

The State of Colorado was just completing its second year of disaster recovery administration with the 1982 Lawn Lake Disaster in Estes Park and already had in-place the necessary knowledge for administration of the Western Slope Disaster.

The DODES Director mission assigned the Department of Administration (DOA) to assist in staffing the Grand Junction Field Office. A representative of DOA was on the scene in Grand Junction for a number of weeks staffing the office, obtaining supplies, automobiles, and general logistical support. Two local area secretaries were hired on a temporary basis to assist in the preliminary filing, typing and setting up of the field office. Three professional disaster assistance employees were hired on a personal services contract to perform Public Assistance liaison work between the federal government

and local applicants. One retired DODES employee served as Deputy GAR. The temporary local hire secretaries remained on board until the Disaster Field Office closed in late September.

Following the closure of the Grand Junction Field office, the State Disaster Recovery Management office reopened at the State EOC in Golden. Another temporary secretary was hired to perform general administrative duties. Two of the Public Assistance Officers continued to perform applicant liaison, process advances of funds and appeals, and perform other disaster recovery related administrative duties. The other Public Assistance employee serving as Deputy GAR was released when the Grand Junction office closed.

### **APPLICANTS' FOLLOW-UP BRIEFINGS**

Applicants' follow-up briefings were conducted by Disaster Recovery Management Staff for most applicants in their offices. The purpose of the follow-up briefings was to discuss in detail the necessary administrative procedures and review assistance programs and funding options. During these briefings special needs of the applicants were discussed, such as obtaining additional grant money from DOLA to construct new facilities at Oak Creek and Silt. The special need for record keeping was also discussed.

## **APPLICANT LIAISON**

The two Disaster Recovery Management staff employees insured that adequate applicant liaison was maintained. During the operation of the Grand Junction Field office it was not uncommon to log over 500 miles each day visiting the applicants. The liaison was necessary to insure adequate record keeping methods were underway from the beginning. The staff insured that time deadlines were being met or the proper requests for extensions were submitted. The staff assisted in the preparation of grants to DOLA for funding of the Red Cliff Water Treatment Plant and assisted applicants with special hazard mitigation planning.

## **APPLICANT RECORD KEEPING**

The Disaster Recovery Management Staff stressed the critical importance of record keeping to the applicants.

**IT IS VIRTUALLY IMPOSSIBLE  
TO ACCURATELY AND PROPERLY  
COMPLETE THE NECESSARY  
RECORD KEEPING AFTER  
DISASTER EMERGENCY WORK HAS  
BEEN DONE AND A PERIOD OF  
TIME HAS ELAPSED**

The recovery staff provided samples of proper record keeping and blank forms to each applicant (see Appendix D). The

applicant was instructed to provide a minimum filing system which included a separate file folder for each work project (DSR). The applicants were instructed to pick someone in their organization, and train them in the proper record keeping necessary to receive the maximum recovery dollars.

The Force Account Labor, Equipment, and Supply record keeping caused the greatest problems from a documentation standpoint. The documentation for force account is far more involved and necessarily requires that someone be trained to accomplish the record keeping. Someone must start keeping the records immediately upon the onset of a disaster emergency situation.

Several applicants lost thousands of dollars because of inadequate record keeping following the disaster.

One community, after receiving a \$50,000 Advance of Funds, stated they were not going to prepare the paper work. However, after DODES threatened to request the return of the \$50,000, they hired a consultant to prepare the documentation and received an additional \$25,000.

One community used a computer to process all of the force account work, however they coded all of the entries into one cost code instead of maintaining records by each DSR. FEMA disallowed their project application until the community provided the proper documentation.

One county road and bridge foreman when, asked why disaster records were not being maintained, stated.....

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**"IF I HAD WANTED TO DO PAPERWORK I WOULD HAVE BEEN AN ACCOUNTANT"**

**COUNTY ROAD AND BRIDGE FOREMAN**

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The foreman was told to find some person, have him or her follow you around, filling out a note pad for later transcribing into the permanent records, as you make decisions on emergency work, debris clearance, and permanent work.

Although the extra person was not reimbursable under this disaster, the amount of salary the applicant paid out was offset by the thousands of dollars recouped by good record keeping.

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**CHAPTER 8**

**DISASTER COSTS**

**(PUBLIC ASSISTANCE PROGRAM)**

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**CHAPTER 8 - DISASTER COSTS  
(PUBLIC ASSISTANCE PROGRAM)**

<b>1984 Western Slope Damage Costs</b>	
<b>Federal</b>	
Public Assistance Grants (75% FEMA).....	4,771,580
Small Business Administration (Loans)...	738,000
Federal Highway Administration.....	1,190,000
USDA Soil Conservation Service.....	69,000
U.S. Forest Service.....	2,500,000
U.S. Army Corps of Engineers (Flood Fight Activities).....	122,200
Sub Total.....	9,390,780
<b>State</b>	
Colorado Legislature 1985.....	700,000
Other State Non Operating Accounts.....	120,000
State Agencies (Indirect Costs).....	250,000
Department of Local Affairs (DOLA) Grants	
Silt Water Plant.....	480,000
Oak Creek Water System.....	150,000
Red Cliff Water System.....	275,000
Red Cliff Mudslide Deflection Wall...	75,000
Sub Total.....	2,050,000
<b>Local</b>	
Public Assistance Local Match (15%).....	899,508
Moffat County Bridges and Wilson Creek Slide Area.....	950,000
Garfield County for Silt Water Plant...	439,000
Ute Water Mitigation Actions.....	250,000
Delta County Bridges.....	100,000
Pitkin County (Retaining Wall).....	35,000
Disaster Claims Not Reimbursed.....	750,000
Sub Total.....	3,423,508
<b>Private</b>	
Private Residence Damage.....	1,714,000
Estimated Agricultural Damage and Losses	12,300,000
Private Roads.....	500,000
Sub Total.....	14,514,000
<b>TOTAL.....</b>	<b>\$29,378,288</b>

**Table 1. 1984 Western Slope Damage Costs**

The total cost of the 1984 Western Slope Disaster will not be fully realized for a long time. Indirect and intangible costs continue to surface and even direct costs change (invariably increases) as time and recovery progress. Total

damage, loss, recovery, and mitigation costs are currently estimated at \$29,378,288 for 1984's floods and landslides. Table 1 (above) details these costs by federal, state, local, and private origins. Under the provisions of the Disaster

Relief Act of 1974 (Public Law 93-288), federal financial assistance is provided for recovery from presidentially declared disasters. This assistance is supplementary to state, local government, and private sector efforts and resources. This assistance can cover up to 75 percent of the total public assistance costs.

The federal disaster assistance program provides public assistance (aid to state and local governments) and in some cases, individual assistance (aid for disaster victims and their families).

Public assistance grants are made for emergency protective measures, debris clearance, and the repair and/or restoration of damaged public and certain nonprofit facilities. Public damages of this nature are put into nine categories: (A) debris clearance; (B) protective measures; (C) road systems; (D) water control facilities; (E) public buildings and equipment; (F) public utilities; (G) facilities under construction; (H) private non-profit facilities; and (I) other public facilities. Public assistance from federal, state, and local governments totaled over \$6.3 million in 1984.

The 1984 Federal-State Agreement, consistent with the requirement that Federal assistance be supplemental, provided that Federal funds provided under the Act for Public Assistance be limited to 75 percent of total eligible costs in the designated area. The remaining 25 percent of eligible costs were provided as follows:

- o The State's portion of the non-federal share will amount to zero percent for private non-profit applicants and at least 10% of total eligible costs for local applicants.
- o For State applicants, the State's share will amount to 25 percent of total eligible costs.

Table 2, Disaster Costs (Public Assistance Program) details each applicant and their costs to date. Several applicant projects are still open pending final claim and appeals.

APPLICANT	PUBLIC ASSISTANCE TOTAL	FEDERAL SHARE (75%)	STATE SHARE (10%)	LOCAL SHARE (15%)
DELTA COUNTY	238,629	178,972	23,863	35,794
PAONIA	115,306	86,480	11,530	17,296
DELTA CITY (1)	217,627	163,220	21,763	32,644
DELTA MONTROSE ELECTRIC	53,751	40,313		13,437
TRI COUNTY WATER	1,363	1,023	136	204
HOTCHKISS SANITATION	31,174	24,646	3,686	5,529
DOLORIS COUNTY (1)	36,861	27,646	3,686	5,529
EAGLE COUNTY	86,238	64,679	8,624	12,936
VAIL	113,143	84,857	11,314	16,972
RED CLIFF	6,972	5,229	697	1,046
VAIL VALLEY WATER	15,198	11,399	1,520	2,279
BASALT SANITATION	877	658	88	132
RED CLIFF SANITATION	37,951	28,463	3,795	5,693
MINTURN	6,503	4,877	650	975
BEAVER CREEK METRO DIST	16,474	12,355	1,647	2,471
EAGLE SANITATION	6,519	4,889	652	978
GARFIELD COUNTY	59,417	44,562	5,942	8,913
SILT	107,371	80,528	10,737	16,106
NEW CASTLE	8,704	6,528	870	1,306
RIFLE	7,087	5,315	709	1,063
GLENWOOD SPRINGS	14,943	11,207	1,494	2,241
PARACHUTE	36,840	27,630	3,684	5,526
HOLY CROSS ELECTRIC	24,306	18,230		6,076
GUNNISON COUNTY	297,204	222,903	29,720	44,581
GUNNISON HEALTH CENTER	7,052	5,289		1,763
GUNNISON CITY	38,761	29,071	3,876	5,814
CRESTED BUTTE	37,688	28,266	3,768	5,653
GUNNISON COUNTY ELECT	22,019	16,514		5,505
PITKIN TOWN	43,877	32,908	4,388	6,582
HINSDALE COUNTY	24,539	18,404	2,434	3,681
LAKE CITY SANITATION	30,037	22,527	3,004	4,506
MESA COUNTY (1)	162,680	121,635	16,268	24,777
UTE WATER CONSERVANCY	809,851	607,388	80,985	121,478
GRAND JUNCTION	339,716	254,787	33,972	50,957
CLIFTON SANITATION 1	13,132	9,849	1,313	1,970
CLIFTON SANITATION 2	17,276	12,957	1,728	2,591
CLIFTON WATER DISTRICT	1,000	750	100	150
DEBEQUE	56,246	42,184	5,625	8,437

Table 2. Disaster Costs (Public Assistance)

APPLICANT	PUBLIC ASSISTANCE TOTAL	FEDERAL SHARE (75%)	STATE SHARE (10%)	LOCAL SHARE (15%)
MESA WATER & SANITATION	1,278	959	128	191
GRAND VALLEY POWER	34,265	25,699		8,566
COLLBRAN	292,879	219,659	29,288	43,932
MOFFAT COUNTY	358,568	268,926	35,857	53,785
YAMPA VALLEY ELECTRIC	168,615	126,461		42,154
CRAIG	263,208	197,406	26,321	39,481
MONTROSE COUNTY	72,188	54,141	7,219	13,828
MONTROSE CITY	44,405	33,304	4,441	6,660
NATURITA	31,660	23,745	3,166	4,749
OLATHE	18,995	14,246	1,900	2,849
MONTROSE RECREATION	21,318	15,989	2,132	3,197
PROJECT 7 WATER AUTHORITY	32,598	24,449	3,260	4,889
CHIPETA WATER COMPANY	2,490	1,867		623
OURAY COUNTY	59,024	44,268	5,902	8,854
OURAY CITY	31,280	23,460	3,128	4,692
PITKIN COUNTY (1)	228,059	171,044	22,806	34,209
SNOWMASS WATER & SAN	126,232	94,674	12,623	18,935
SNOWMASS VILLAGE	103,110	77,332	10,311	15,467
ASPEN	15,830	11,873	1,583	2,374
RIO BLANCO COUNTY	266,091	199,568	26,609	39,914
WHITE RIVER ELECTRIC	3,234	2,424		808
ROUTT COUNTY	78,668	59,001	7,867	11,800
OAK CREEK (1)	221,859	166,394	22,186	33,279
HAYDEN	8,957	6,718	896	1,343
STEAMBOAT SPRINGS	31,741	23,806	3,174	4,761
SAGUACHE COUNTY	29,260	21,945	2,926	4,389
BONANZA	2,357	1,767	236	354
SAN MIGUEL COUNTY	93,726	70,294	9,373	14,059
COLORADO HIGHWAYS	56,162	42,122	14,040	
COLORADO PUBLIC SAFETY	108,971	81,728	27,243	
COLORADO PARKS (1)	110,922	83,192	27,730	
COLORADO WILDLIFE (2)	299,824	224,868	74,956	
	6,405,984	4,804,488	695,406	906,090

NOTES:

(1)..Appeal Pending (2)..Project Application Pending Close-out

Table 2. Disaster Costs (Public Assistance Program)(Continued)



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**CHAPTER 9**  
**FINANCING THE**  
**DISASTER RECOVERY**

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## CHAPTER 9 - FINANCING THE DISASTER RECOVERY

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### FEDERAL GOVERNMENT

#### Source of Funds

The Federal Disaster Relief Act provides for a relief fund which covers the costs of the federal government in providing supplemental assistance to state and local governments as well as to certain private non-profit entities who have suffered disaster impacts. Included in the Act are provisions for the expenses of the federal government in managing such assistance as well as providing for reimbursement of disaster related emergency and permanent work and protective measures. This was the major federal program involved in providing disaster recovery assistance, although there are other federal programs of lesser significance or routine in nature that applied.

#### Financial Management and Advances of Funds

FEMA's disaster recovery financial management is provided through the use of Disaster Damage Survey Reports (DSR's) -- an engineering estimate of scope of work and related costs for each disaster site as well as for emergency protective measures. These DSR's are accumulated by jurisdiction or agency into an

approved project application which provides authorization for advances of federal funds to reimburse actual and contemplated expenses as work progresses.

Implementation of the recovery program was accomplished through FEMA's use of a "Letter of Credit" to DODES, who acted on behalf of the federal government in financial transactions. This Letter of Credit provides funds for the State to issue warrants to eligible applicants for the federal share of approved projects. FEMA maintains management control by limiting State approval of advances to 75% of the federal share (retaining approval of additional advances beyond 75% of the federal share) and final approval of claims. FEMA requires periodic status reports as well as financial reports to monitor the status of the financial transactions taking place.

All disaster recovery grants are subject to federal audit requirements. Changes in scope of work as defined in the DSR or cost overruns must be approved by FEMA. The disaster public assistance program is a cost shared program: 75% federal and 25% state/local based on FEMA eligible program costs.

## **STATE GOVERNMENT**

### Sources of Funding

Colorado does not have a disaster emergency fund, rather it operates routinely on a small emergency contingency fund (\$100,000 annually) in the Office of the Governor. The emergency contingency fund is supplemented by emergency transfers, when justified and authorized by the Governor and Colorado Disaster Council, from other funding sources and from legislative appropriations, when approved for a specific purpose.

During the 1984 disaster flood fight phase, the Governor's emergency contingency fund (\$100,000), as well as a special flood fund (\$100,000), were rapidly expended down. The emergency funds were used in providing for sandbags, emergency levee construction, aerial photography, emergency grants to local jurisdictions, and for hiring temporary personnel to provide state flood fighting liaison.

After the 1984 Western Slope disaster was declared, the majority of flood fighting expenditures, including those of the State, became eligible under the federal disaster public assistance program as emergency protective measures. FEMA reimbursed the state on a 75% basis, amounting to \$81,728. The Governor authorized DODES to use these funds to assist in the cost of recovery.

Once the decision to seek a presidential declaration was made, it was noted that certain state expenses were inherent, especially if the request was approved. These include costs of:

- o disaster recovery management (Applicant Liaison),
- o preparation of Damage Survey Reports (DSR's),
- o processing of advances of funds (financial transactions),
- o development of a State Hazard Mitigation Plan,
- o conducting required audits and financial reviews,
- o performing final inspections of completed work, and
- o managing the State share of approved disaster projects.

Initiation of the disaster recovery program was accomplished with the transfer of \$120,000 from a non-operating account into the State Disaster Emergency Fund.

**Summary of State Funds  
for  
Disaster Recovery**

1.	Federal Reimbursement of Governor's Disaster Emergency Fund Expenditures . . . . .	\$ 81,728
2.	Fund Transfer from Non-Operating Accounts Created by Executive Order Number 0-003993 . . . . .	120,000
3.	Supplemental Appropriation . . . . .	700,000
4.	Other (Estimate of Indirect Costs Absorbed by Various State Agencies) . .	250,000
5.	Special Flood Fund Transfer . . . . .	14,000
	TOTAL . . . . .	\$ 1,165,728

**Table 3. Summary of State Funds and Their Sources Directed to the Disaster Recovery.**

This fund transfer enabled DODES to get the program off the ground until a detailed analysis of the State's total costs could be developed. Following the fund transfer, a supplemental appropriation was submitted to the State Legislature to cover these and other costs in January of 1985. It was submitted and approved by the State Legislature with funding available in July of 1985.

The time delay between the request for funds and their availability caused considerable problems for both the State Disaster Recovery Management Staff and the local government applicants.

The applicants were required to cover their own share, the state's share, and a portion of the federal government's share of approved disaster work. In many cases this led to severe cash flow problems on behalf of the applicant.

The State Disaster Recovery Management Staff had to seek other sources of funding to cover their program expenses until supplemental funds became available.

A summary of state funds and their source directed to the disaster recovery are shown in Table 3.

One element that directly effected the State's costs was the extended duration of the recovery program; going on four and one half years at the time of this report. It is noted that three levels of government are involved in the disaster recovery program:

- o The federal government (FEMA) whose program it is and who retains key program decision authority;
- o The local government or applicant who is responsible for doing the work; and

- o The State who acts as the bridge between the federal and local governments.

The schedule of priorities of the three levels of government vary causing considerable delays, resulting in drawing out the recovery period and the associated recovery management expenses.

DODES initiated several innovative mechanisms to hold down these costs including staff reductions and limitations on hours worked during slow periods to attempt to hold the line on costs.

#### Financial Management

DODES and the Department of Public Safety, in a joint effort, used the State's accounting and procurement system to meet program goals and objectives. This effort was expedited, when necessary, using the emergency authority of the Governor as provided for in his emergency declaration.

A general ledger account was established for administering the federal share of approved payments, as well as a sub-accounting system by applicant for federal disaster recovery funds. The state share of approved projects, as well as the State disaster recovery management funds, were deposited into a separate account. DODES recovery management staff processed all vouchers with supporting documentation through the Colorado Department of Public Safety.

Warrants for eligible applicants were hand delivered to the Governor's Authorized Representative and forwarded to the applicant by certified mail, return receipt. A letter of transmittal explaining the financial transaction and a copy of the supporting documentation for the action accompanied the warrant to the applicant.

A computerized financial status report was issued on a periodic basis and distributed to the Department of Public Safety (DPS), the State Coordinating Officer (SCO), and the Office of State Planning and Budget (OSPB) (see Appendix E).

OSPB, within the Governor's office monitored the recovery program closely and acted upon all requests requiring funding decisions. The State followed FEMA's example and only issued advances of funds for reimbursement of actual expenses to date and those contemplated within the next 30 days, with a ceiling of not more than 75% of the State share until all work was completed and inspected.

The applicants' requests for advances of funds were processed as frequently as possible, leading to numerous advances for each applicant. DODES recovery staff maintained a copy of all financial transactions and a program file for each applicant. The Department of Public Safety issued financial reports to the U.S. Treasury and FEMA under the Letter of Credit reimbursement procedures.

Financial reviews of the applicants records were made by the Department of Public Safety (DPS) auditor as assigned by DODES. The applicants' audit records were reviewed by DPS under the provision of the Federal single audit act. State warrants, in many cases, were issued for both the State and Federal Shares in a single warrant. This action caused some confusion on the part of applicants as to the source of the funds (that is, whether they were state or federal funds and how to account for them).

## **LOCAL GOVERNMENT**

### Source of Funds

Local government funding of the disaster came from revenues already on hand in the community for providing governmental services, or from existing contingency funds. Some local governments transferred funds within accounts to address the emergency response and recovery impacts of the disaster. Several locally planned community projects had to be postponed or canceled in order to facilitate these transfers of funds.

Local governments used special mill levies, increases in taxes, fund raisers, and grants to generate the necessary local funds for the disaster costs.

### Financial Management

Applicant financial management systems in most cases continued to mirror the day-in-day-out

routine system of the jurisdiction. Each applicant modified their existing system to accommodate the record-keeping and documentation requirements of the federal grant program.

The need for adequate and accurate documentation was stressed by the DODES recovery staff throughout the recovery period. Even with this emphasis of frequent applicant liaison, several applicants had a difficult time maintaining adequate records to fully support their disaster eligible costs as claimed. This was especially true in many of the smaller jurisdictions which had part time staffs, many of whom frequently changed during the recovery process. Even the larger jurisdictions were impacted by the employee turnover problem.

Financial management, for the most part, was based on general government principles. Local Government annual audits incorporated disaster recovery financial management as part of their normal audit process, in accordance with the federal single audit act.

To date, no major significant audit exceptions or misuse of disaster recovery funds has been noted. One weakness noted throughout this disaster recovery was in the compiling of force account records maintained by local governments, which in many cases were hard to decipher and link to specific disaster sites/projects.

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**CHAPTER 10**

**HAZARD MITIGATION**

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## **CHAPTER 10 - HAZARD MITIGATION**

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Hazard Mitigation is defined as a plan "to alleviate by softening and making less severe the effects of a major disaster or emergency and of future disasters in the effected areas, including reduction or avoidance" (reference 1). "Hazard mitigation can reduce the severity of the effects of flood emergency on people and property by reducing the cause or occurrence of the hazard; reducing exposure to the hazard; or reducing the effects through preparedness, response and recovery measures. Hazard mitigation is a management strategy in which current actions and expenditures to reduce the occurrence or severity of potential flood disasters are balanced with potential losses from future floods" (Reference 1).

Section 406 (now Section 409), Public Law 93-288 requires, as a condition to receiving federal disaster aid, that repairs be done in accordance with applicable codes, specifications, and standards. It also requires that state or local government recipients of federal aid evaluate the natural hazards of the area in which the aid is to be used and, if appropriate, take actions to mitigate them, including safe land use and construction practices in accordance with standards prescribed or approved by the President after consultation with local elected officials.

In response to this legislation, FEMA promulgated regulations (44 FR 64809, November 8, 1979). These regulations (44CFR 205, Subpart M - Hazard Mitigation Regulations) were intended to respond to Section 406, and to complement and reinforce Executive Order 11988, Floodplain Management; Executive Order 11990 -Wetlands Protection; and the National Environmental Policy Act of 1969, P.L.91-190.

### **FEMA HAZARD MITIGATION REPORT**

FEMA assembled a small cadre of professionals to examine the 1984 West Slope Damage Survey Reports for possible mitigation opportunities. Since the State had prepared the Flood Hazard Mitigation Plan for Colorado in 1983, FEMA and the State agreed to update the 1983 Plan. Paragraph 10 of the Federal State Agreement, dated July 27, 1984, mentions the hazard mitigation plan (see Appendix C).

### **COLORADO FLOOD HAZARD MITIGATION PLAN**

The first Colorado Flood Hazard Mitigation Plan was prepared following the Estes Park disaster in 1982. The Plan was written by a steering committee consisting of The State Hazard Mitigation Coordinator from the Colorado Water Conservation

Board, Department of Natural Resources, the State Coordinating Officer from the Division of Disaster Emergency Services, and their respective staffs. The steering committee members prepared the body of the report and arrived at a series of conclusions and recommendations that represented their best judgement of the most effective flood hazard mitigation measures. The authors of the report were assisted by an inter-governmental task force organized by the State Hazard Mitigation Coordinator. This approach guaranteed sufficient input from federal, state, and local government agencies which appear to have potential opportunities for flood hazard mitigation (reference 1).

#### STATE INPUT

The following state agencies participated on the task force that helped prepare the Plan (Reference 2):

Governor's Office  
Department of Natural Resources  
Colorado Water Conservation Board  
Colorado Geological Survey  
Division of Water Resources  
Colorado Soil Conservation Board  
Division of Parks and Outdoor Recreation  
Division of Wildlife  
Division of Mined Land Reclamation  
State Land Board  
Division of Disaster Emergency Services  
Department of Highways  
Department of Health  
Department of Local Affairs

Department of Administration  
Department of Education  
Department of Higher Education  
Urban Drainage and Flood Control District

#### LOCAL INPUT

The following local governments were especially supportive of the hazard mitigation plan concept and provided valuable comments from their perspective in preparing the Plan (Reference 2):

City of Craig  
Town of Silt  
Town of New Castle  
Eagle County  
Moffat County  
City of Gunnison  
Gunnison County  
Garfield County  
Rio Blanco County  
City of Rifle

#### FEDERAL INPUT

The following federal government agencies provided valuable technical assistance in the preparation of the Plan (Reference 2):

Federal Emergency Management Agency  
Corps of Engineers  
U.S. Geological Survey  
U.S. Soil Conservation Service  
U.S. Forest Service  
National Weather Service  
Environmental Protection Agency

#### HAZARD MITIGATION OPPORTUNITIES

FEMA authorizes permanent repair work under Section 402 of the Disaster Act and the

regulations.

The Act includes assistance to eligible applicants to repair, restore, reconstruct, or replace eligible facilities on the basis of the design of the facilities as they existed immediately prior to the disaster and in conformity with applicable standards. The Act does not provide assistance to improve the facility, however, certain additional costs (not to exceed 15%) for disaster proofing or hazard mitigation may be added to the DSR amount, subject to approval by the FEMA Associate Director (Reference 3).

A number of Colorado political subdivisions suffered partial losses of public facilities. Many of these were faced with possible future losses and decided to improve the facility. Certain mitigation projects and alternate sources of funding were explored by the following communities to improve the facility and prevent future losses again.

## **DELTA COUNTY**

Town of Paonia - Swelled by snowmelt, the North Fork of the Gunnison River ravaged the Riverside Estates subdivision in Paonia. One home's foundation was undercut and fell into the river while another home was seriously endangered. This was not the first time Riverside Estates had experienced problems.

In 1980, the Governor's Emergency Fund provided \$25,000 in matching funds to construct rip-rap protection for the

subdivision. The subdivision was located in the floodplain on the banks of the river, a questionable decision of local officials.

The National Flood Insurance Program (NFIP) has paid out over \$70,000 in claims for this subdivision over the years. Town officials seized the opportunity to pursue Community Development Block Grant (CDBG) funding to purchase the properties, relocate the residents, and build a park on the site. The application for CDBG funds was denied by State officials due to a lack of local supporting match funds. After receiving the notice of negative CDBG funding, the levee and bank of the Gunnison adjacent to the homes was armored with rip-rap utilizing FEMA and State disaster funds. A failure on the part of the NFIP to purchase the properties due to lack of funds in the program and other priorities nationwide is noted. The NFIP paid the homeowners for their damages. This site will cause problems again with the next high flows on the North Fork.

## **EAGLE COUNTY**

Red Cliff - During the snowmelt period in May of 1984, several landslides occurred on steep slopes above the Town of Red Cliff. The landslide poured down the slope intersecting the main road into town. The slide buried the road to a depth of four ft. and closed the road for over a week. Several homes sustained water and mud damage to basements and one home was dislodged from its foundation.

During 1985, the Colorado Geological Survey noted several detached land slides above the town and cautioned residents of the potential for additional damage. A landslide warning device was installed by the town, with assistance of the Colorado Geological Survey and Colorado Division of Disaster Emergency Services and financial assistance from the Governor's Emergency Fund.

The warning device was a preliminary mitigation action until additional studies and structural mitigation actions could be undertaken.



Photo 18. Landslide Deflection Wall Constructed at Red Cliff.

A debris wall was constructed along the road to protect homes in the path of potential landslides. DOLA funded the landslide deflection wall at a cost of over \$75,000.

Red Cliff Water and Sanitation District - The Red Cliff Water treatment facility suffered

damage when snowmelt occurred and resulting landslides and high water inundated the treatment plant. The plant is located along Turkey Creek one mile upstream of the Town of Red Cliff. FEMA authorized \$28,000 in repair work to restore the plant to its pre-disaster condition. However, prior to the 1984 disaster damage, the water treatment facility failed to meet the minimum standards of the Colorado Department of Health (CDOH). A raw water line, severely rusted and deteriorated, needed replacement. The treatment plant filter required replacement and improvements to the Tates Gulch raw water supply were also needed.

In light of a threatened "Cease and Desist" order from CDOH and in view of the obvious health threat to the Town of Red Cliff residents, the Red Cliff Water and Sanitation District Board declared the improvements to the system to be their highest community priority. DODES staff provided assistance in preparing an application to the Colorado Department of Local Affairs Impact Assistance Office for grant funds to make the necessary improvements. FEMA and State disaster dollars provided the matching funds required to successfully obtain a \$275,000 grant.

#### PROJECT FUNDING

FEMA Disaster Funds..	\$ 28,463
State Disaster Funds.	3,795
Town of Red Cliff....	5,692
DOLA Impact Grant....	275,000
	-----
Total	\$352,040

The plant is now repaired and the Town's residents are enjoying safe drinking water. This is an excellent example of using FEMA and State funds to "leverage" other grant sources to improve a disaster damaged facility beyond the federal and state funding capabilities.

**GARFIELD COUNTY**

Silt - The Colorado River threatened the Town's water intake and treatment facility. After a fierce flood-fight, the river had infiltrated the intake galleries and parts of the plant. The town's consulting engineer estimated that over \$435,000 would be required to protect the plant at the island location. The Colorado Water Conservation Board, State Engineers Office, State Health Department and the Town's Consulting Engineer all agreed that the plant should be relocated to a flood free location.

The town requested FEMA assistance in relocating the plant at a cost of \$950,000, however, Public Law 93-288 only allows funding for repairs to existing facilities or a Grant-in-Lieu for relocation. FEMA assisted the town with flood fighting costs, a plant water filter at \$70,000, and repairs to the access road and walk bridge into the plant. The town constructed a new plant at a flood free location adjacent to its original location at a cost of over \$1,000,000. The project was funded using the following sources:



Photo 19. Aerial View of (New) Silt Water Treatment Plant.

PROJECT FUNDING

<b>FEMA Funding</b>	
(Grant-in-Lieu).....	\$ 105,000
State Disaster Funding.....	14,000
Colorado Water and Sewer Fund.....	6,000
Colorado Impact Assistance.....	480,000
Garfield County Oil Shale Trust Fund....	439,000
Town of Silt Funds...	20,000
	-----
<b>Total</b>	<b>\$ 1,064,000</b>

**MESA COUNTY**

Collbran - Spring floodwaters along Plateau creek at Collbran destroyed the town's rodeo grounds and tennis courts. The town was unable to move the rodeo grounds due to its size, however, the tennis courts were relocated to high ground above Town.

The new tennis courts are now accompanied by a new basketball court. The basketball court is an improvement to the original tennis court and funded by the Town. The new facility is removed from the floodplain, thus eliminating future flood damages. Funding for the new facility is as follows:

PROJECT FUNDING

FEMA Disaster Funds	
(Tennis Court).....	\$ 19,688
State Disaster Funds	
(Tennis Court).....	\$ 1,969
Town of Collbran Funds	
(Tennis and Basketball Courts).....	\$ 27,553
	-----
	\$ 49,210

Ute Water Conservancy District  
 - During 1983, high floodwaters along Plateau Creek and the Colorado River prompted District officials to begin to mitigate possible future losses. Along Plateau Creek, where 24 and 48 inch water mains follow the boundaries of the Creek, repeated damages over the years had taken their toll on District facilities.

During May of 1984, District officials, in advance of the flood season, contracted for levees and rip-rap protection to prevent damages to the water lines saving thousands of dollars in damages.

During 1983, the District's pumping station along the Colorado River near Interstate 70 suffered high damages to the electric motors, switch gear, and pumps.

When the pump station was



Photo 20. Retaining Wall Constructed during 1983 to Protect Ute Water Conservancy District Pump Station located on Colorado River Near Grand Junction (Note: 1984 Floodwater Nearly Overtopped Wall).

constructed, District officials believed they had constructed the operating floor to the 500-year flood elevation. However, when floodwaters entered the facility in 1983, officials discovered the elevation was actually a 50-year flood elevation. Following the damage to the facility in 1983, District work crews spent over \$100,000 constructing a floodwall around the building and elevating pump motors and the electric switch gear three ft. During the flood of 1984, floodwaters again entered the building, damaging only the

pump sumps. Thousands of dollars in District, State and Federal funds were saved in this mitigation effort.

**MOFFAT COUNTY**

Moffat County Slater Creek Bridge - This bridge suffered damage to one abutment and footing.

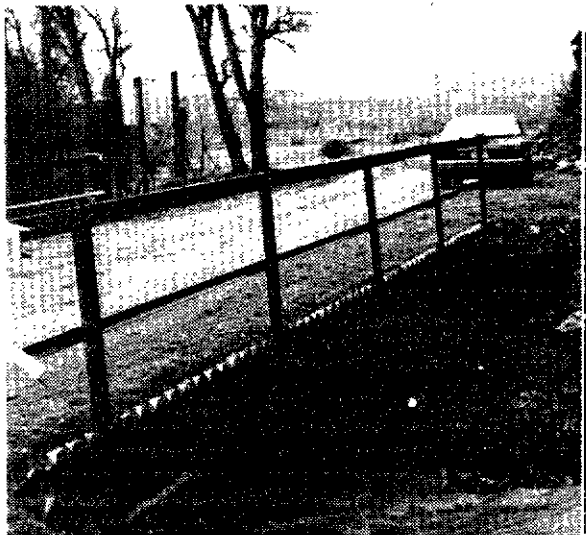


Photo 21. Slater Creek Bridge in Northern Moffat County Re-constructed After the Flood of 1984.

FEMA would only authorize the replacement of the one abutment at \$4600. The Slater Creek Bridge is located in a remote northern area of Moffat County and is the only access for residents and emergency vehicles to this part of the County. The County decided to replace the bridge, since it was below State and County standards, due to its remote location. The new bridge was constructed at a cost of \$43,000.

PROJECT FUNDING

FEMA Disaster Funds...	\$ 3,450
STATE Disaster Funds..	\$ 460
Moffat County Funds...	\$ 39,090
	-----
Total	\$ 43,000

The new bridge, as constructed, will accommodate the higher stream flows along Slater Creek and will not likely wash away during the next flood event.

Moffat County Wilson Creek Slide and Road - Near the Rio Blanco County line along Moffat County Road 51 the embankment and road slipped out at five locations. FEMA authorized the replacement of over 7,000 cubic yards of material to bring the road back to its original condition at an estimated cost of \$49,000. During 1982-83, Moffat County spent over \$250,000 to maintain the road and embankments only to have it slip out again in 1984. The road serves as the only access to the Texaco oil fields and six families. The County has investigated alternate road locations with no success. The County continues to maintain the road in the best possible condition until such time the "wet cycle" subsides and the slides stabilize.

The Colorado Geological Survey surveyed the area and gave their assessment to Moffat County Officials. Landslide mitigation at this site will require the installation of drainage facilities; however, the cost of such facilities, estimated at \$500,000, are difficult to justify. This area will continue to cause problems for the County in the

future.

Moffat County Golf Course - The County owned golf course, near Craig and adjacent to the Yampa River, suffered damage to the levee and fairways when the river overflowed its banks. FEMA damage estimates totaled \$60,000 for repair and replacement of fairways and levee portions.

Golf course officials applied for a Corps of Engineers 404 permit for replacement of bank material along the Yampa River and were told by Corps officials that rip-rap protection would be required as a condition of receiving the permit. The additional rip-rap protection estimated at \$35,000 was installed by the County. The County successfully appealed to FEMA for the additional funding for the rip-rap.

This mitigation case is unique since the rip-rap is an improvement to the original golf course embankment and another Federal agency required the additional work effort.

**ROUTT COUNTY**

Town of Oak Creek - Spring snowmelt transformed Oak Creek into a raging torrent destroying the town's raw water system.

The Colorado Department of Local Affairs assisted the town with a \$150,000 grant to rebuild the water system to new standards. The Environmental Protection Agency (EPA) assisted in the design of the new system. The new raw water

storage dam and water lines were relocated out of the stream bed to prevent future damage.

**PROJECT FUNDING**

FEMA Disaster Funds..	\$ 123,000
DOLA Grant .....	\$ 150,000
Colorado Disaster	
Emergency Funds ....	\$ 16,400
Town of Oak Creek ...	\$ 24,600
	-----
Total	\$ 314,000

Within the town, enlarged culverts are now in-place to accommodate future high flows.

**OTHER  
MITIGATION  
ACTIONS**

The above actions by several Colorado communities to reduce the future effects of disasters through mitigation action are only some of the more significant opportunities pursued during the course of the recovery program. Many other communities completed projects of lesser significance that contributed to the overall effect of incorporating mitigation strategies into the recovery program.



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**CHAPTER 11**  
**PUBLIC ASSISTANCE**  
**PROGRAM ADMINISTRATION**

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## CHAPTER 11 - PUBLIC ASSISTANCE PROGRAM ADMINISTRATION

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### DISASTER FIELD OFFICE, GOLDEN

During September of 1984, the Grand Junction Field Office closed and the Disaster Recovery Staff and disaster recovery operation was moved to the State EOC in Golden.

The recovery staff immediately went about the process of establishing administrative procedures and development of the necessary forms such as Advance of Funds and Summaries of Documentation Forms (see Appendix D). In order to expedite the paper process, an Apple computer was leased with accompanying software. This was the first use of a computer in the DODES office by clerical personnel for clerical work and was soon expanded to the rest of the DODES office staff. The computerized word processing, data base development, and financial spread sheets kept track of the recovery effort in an expeditious manner. As time passed, the Apple was phased out in favor of an IBM.

The Disaster Recovery Staff, consisting of two professionals and one secretary, provided guidance to applicants with respect to Public Assistance program rules and regulations, hazard mitigation, floodplain management and special recovery programs. The State maintained liaison with applicants throughout the entire public

assistance process to insure that (a) proper record-keeping methods were being used, (b) time limits were being met, and (c) problems and questions were resolved in a timely manner.

It is noted that the recovery staff devoted a significant portion of day-to-day activities in travel, regular correspondence and telephone coordination activities. Due to the remoteness of the effected area from Golden, a great part of staff time was involved in travel to and around the Western Slope. It is estimated that at least half of the field work time was spent in travel between applicant sites. The following aspects of program administration were regular staff functions as well as indicators of the staff workload.

Principal components in the administration of the program are discussed individually below.

### PROGRAM ADMINISTRATION

The Division of Disaster Emergency Services (DODES) was the point of contact for local applicants' information, advice and technical interpretations regarding federal and state assistance.

Program Status Reports - The use of the computer data base

allowed DODES staff to prepare a number of Program Status Reports for the Governor's Office, Office of Planning and Budget and other state agencies. The Program Status Reports were informative as to financial status of the program and progress of applicants (see Appendix E for sample reports and financial spread sheets used during the recovery period).

#### New Project Applications -

On December 4, 1984, Eagle County was included under the President's July 27th disaster declaration, bringing to 15 the number of counties eligible for assistance. The inclusion of Eagle County generated eight new project applications from the County and other subdivisions. The Recovery Staff was required to perform or assist in applicant's briefings, inspections, Damage Survey Report (DSR) preparation and processing advance of funds for the new applicants.

Suspended Damage Survey Reports (DSR's) - Occasionally, FEMA staff would suspend a DSR pending additional information from the applicant. The Disaster Recovery Staff assisted the applicant in the preparation of documentation, re-inspection reports or technical opinions as required to determine eligibility of the suspended project.

Supplements to Project Applications - Supplements were prepared and processed to increase funding, thereby allowing the applicant to perform new work, additional work or work previously

suspended on a DSR.

Record-Keeping Training and Technical Assistance - The DODES Recovery Management Staff provided guidance to public assistance applicants in the preparation of Summary of Documentation forms (see Appendix D). A primary task of the recovery staff was assisting applicants with record-keeping methods to smooth the way for future audits and inspections and to simplify final claim procedures. Formal record-keeping training was provided during the Grand Junction office period and continued throughout all phases of the program. Many applicant agents were replaced through the recovery period, necessitating the re-training of new agents in record-keeping and project management.

Appeals - Applicant appeals of FEMA determinations were processed through the State and forwarded by the Governor's Authorized Representative (GAR) to FEMA with appropriate comments, recommendations, and supporting documentation. Several applicants, including the communities of Oak Creek,, Delta, Silt, Parachute, Dolores and Mesa Counties, submitted appeals or expressed their intent to appeal FEMA decisions. The recovery staff assisted in supplying information for the appeal action to FEMA.

Advances of Funds - During September of 1984, DODES staff issued a memo to all public assistance applicants concerning Advance of Funds.

The memo included a "Sample Letter" for advance of funds and instructions for requests (see Appendix F). Under normal conditions final settlement of the project does not occur until the applicant completed all approved work on a Project Application and all related bills are paid. In the interim, funds were advanced to meet current obligations for eligible work and those anticipated for the next 30 days. Requests for additional advances of funds were received regularly. The review, approval and processing of such requests was primarily a State function.

Time Extensions - Several requests for time extensions of the time limits prescribed by FEMA for individual projects were made by applicants to the State. Each request was evaluated individually as to the justification for delay in completion of the work and forwarded to FEMA with the State's recommendations.

Grants-In-Lieu - Several grant-in-lieu requests were made to the State. This normally occurred when an applicant preferred to construct a larger or more elaborate facility on a specific approved project (exceeding pre-disaster condition). A grant-in-lieu, equal to that for approved repair or replacement, could be obtained. The most common request occurred when the applicant wanted to replace a culvert with a larger culvert or bridge. The water plant at Silt is an excellent example of the value of a grant-in-lieu. Silt was able to use the estimated damage dollars

(\$100,000) towards a new plant which totaled over \$1.2 million dollars (see Chapter 10 - Hazard Mitigation, Garfield County, Silt example).

## **CLOSE-OUT PROCEDURES**

Audits - On July 8, 1987, the Governor's Authorized Representative informed all public assistance applicants of the Program Audit Requirements in a memo (see Appendix H). All applicant project applications were initially subject to an Office Management and Budget (OMB) Circular A-102 Attachment P Audit and later to the Federal Single Audit Act requirements. This requirement for audit was to be performed as a portion of the first normally scheduled organizational or jurisdictional audit following completion of all disaster related work undertaken under the Disaster Public Assistance Program and payment of all claims for the work. The local jurisdiction's audit firm/agency were required to use the instructions in federal regulations and the audit was to specifically cover the Disaster Public Assistance Program. All transactions made during the program were to be reviewed, including those made in other years. The auditor was instructed to notify State officials if any irregularities were found. The cost of the audit was not an eligible program cost and was to be absorbed by the applicant.

The applicant was required to maintain all records related to the project application for a

period of three years from the date of the audit, or final FEMA settlement of the claim, whichever was later.

DODES enlisted the services of a Department of Public Safety Auditor to conduct eleven On-Site Financial Reviews of applicant's files. The reviews were conducted on selected local applicant's and have provided a greater degree of assurance as to the validity of both federal and state requirements to both FEMA and the State. Since the time of passage of the Federal Single Audit Act, a copy of all audit reports is maintained by the Department of Public Safety. These are reviewed for any irregular audit findings.

Final Inspections - FEMA may require federal and state final inspections for any categorical grant, flexible funding grant, or small project grant, as the Regional Director deems necessary.

The following requirements for Federal final inspection were applicable to categorical and flexible funding grants for this disaster:

(1) For any DSR in which the final claim exceeds \$10,000.

(2) For any DSR for which the total does not exceed \$10,000, the Regional Director may accept a written certification by the applicant's Authorized Representative, describing the project and certifying the claimed actual costs in sufficient detail to permit a desk review by the Governor's Authorized Representative and

by the Regional Director.

The State Public Assistance Officers arranged for and scheduled interim and final inspections as were deemed necessary in addition to the required inspections by FEMA. The applicant's representative was required to assist in the final inspections. In all cases, one of the Public Assistance Officers accompanied FEMA's authorized inspector in the field.

Final inspections were conducted on a number of applicants to determine the validity of the applicant's claim and the scope of the work. In some cases, the final claim was reduced due to the applicant exceeding the approved scope of work with improvements not eligible for reimbursement. Some claims for final payment were increased due to problems during construction or damage items omitted from the original Damage Survey Reports.

Final Claim - On February 11, 1986, the Governor's Authorized Representative, in a memo to public assistance applicants, outlined the Project Application Close-out Procedures (see Appendix G). The State Recovery Staff processed all claims by applicants for final payment following completion of all work by one of three methods.

(a) Limited Project Review and Final Claim - Required the Recovery Staff to review all final claim documents and related costs.

(b) Detailed Project Review and Final Claim - Recovery Staff performed an on-site review of all project costs and claims.

(c) Project and Financial Review - required a review of all Summaries of Documentation and Final Inspection reports and preparation of applicants file for the State Auditor's Office. The Recovery Staff reviewed auditor's reports, prepared state comments, and processed the final claim and payment to the applicant.

For all project applications over \$25,000, the applicant was required to submit Summaries of Documentation and other supporting materials to the DODES Disaster Field Office as the work for each damage site was completed. The applicant assisted in the final inspections and completed a Blanket Certificate indicating all work was complete and where final claims records could be obtained.

The applicant was required to assist in the final program review and claims process as necessary. A desk review based on Summaries of Documentation and Final Inspection Reports was conducted by the State Public Assistance Officers. In some cases, a detailed review based on the above documentation as well as an on-site visit by State and Federal Program personnel to review supporting documentation and records was necessary. In cases of claim dispute or questions, an on-site financial review by an independent auditor was provided by the State.

Final claim recommendations were prepared by the Public Assistance Officers and submitted to the Governor's Authorized Representative for his review and action. The Final Claim was then submitted to FEMA Region VIII for their review and final claim action.

Bill of Collection - Following the completion of FEMA's Final Claim Review, a determination is made of the amount of federal share remaining to be paid to the applicant.

In cases of over advance of the federal share, a "Bill of Collection" is issued by the federal government to the state for return of these funds. The state is responsible in the first instance for repayment to the federal government (FEMA). This action is accomplished through a reverse "Letter of Credit" transaction. The state then collects the overpayment from the specific applicant.

A problem occurs for both the state and applicant in this action since FEMA issues the "Bill of Collection" at the time of the final claim decision and begins to charge interest on the amount owed within thirty days. Since the final claim decision is an appealable action of the applicant, the "Bill of Collection" imposes an undue burden upon the state and its applicants while appeals are pending.

This issue was brought to the attention of FEMA officials. Luckily, the state had the funds available to pay the federal government while appeal

actions were being processed. Four "Bill of Collection" actions were associated with this disaster. Some of the actions were due to over-estimating of Damage Survey Reports (DSR's) and their eligibility on the front-end of the disaster. Several actions involved complex programmatic issues in which there was a considerable difference of opinion concerning eligible costs.

The state has recommended that "Bill of Collections" not be issued until all program appeals are exhausted and the interest involved not commence until the actual "Bill of Collection" is issued. The thirty day grace period before interest is charged for the state to initiate action with applicants, and to process a "Reverse Letter of Credit" transaction, is too short a time span. This period should be extended to sixty days.

## **SPECIAL PROJECTS**

Paonia Riverside Estates - The State Recovery Staff provided technical support and staff assistance to the Town of Paonia in their application for a State Community Development Block Grant to resolve a perennial public health and safety hazard along the North Fork of the Gunnison River (see Chapter 2 - Paonia).

Red Cliff Water and Sanitation - Recovery Staff assisted the District in successfully obtaining a \$275,000 grant to improve their water system beyond the grant-in-lieu from FEMA (see Chapter 10 Mitigation).

Town of Red Cliff - Recovery Staff assisted the Town in the funding, design, and installation of a landslide warning device (see Chapter 10 Mitigation).

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**CHAPTER 12**

**RECOMMENDATIONS**

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## CHAPTER 12 - RECOMMENDATIONS

This chapter has been reserved for a presentation of "Lessons Learned" and "Recommendations" examples that have surfaced during the four years of the recovery period. Actions on the lessons learned are already underway in many cases.

Although responsible organizations are identified for implementation of each lesson learned, the Colorado Division of Disaster Emergency Services (DODES) will assume a coordinating and monitoring role.

### LESSONS LEARNED

PROBLEM	LESSON LEARNED	AGENCY *
1. The use of permanent staff for disaster recovery work creates a FEMA emergency preparedness program management problem.	The use of temporary hire personnel under a personnel services contract to augment state staff is the best way to meet the staffing requirements for disaster recovery.	(1)
2. Without applicant liaison thousands of dollars would have been lost by state agencies and local applicants.	State applicant liaison on a continuing basis over the duration of the disaster recovery period is a cost effective activity and should be pursued in all future disasters.	(1)
3. Several applicants suffered extreme financial hardship due to economic conditions prior to the disaster and aggravated by it.	Process as many advance of funds requests as appropriate to insure a continuous and timely flow of funds to each applicant.	(1)

\* see page 74 for KEY

## RECOMMENDATIONS

PROBLEM	IMPLEMENTATION MEASURE	AGENCY *
4. State disaster funding mechanism needs to be agreed upon.	An in-place, agreed upon state disaster funding mechanism, whether it be a standing disaster fund or spending authority, needs to be adopted by the State.	(1) (2) (3)
5. Program evaluation criteria needs to be built into the disaster recovery program.	A system for program evaluation needs to be developed and built into the program from the start and continue throughout the program, thus allowing for timely program corrections and development of an after action report.	(1)
3. Applicants lost thousands of dollars due to poor record-keeping during the recovery period.	Additional emphasis needs to be placed on record keeping for applicants, especially in the area of force account records. Development of Lotus type NCR sheets and/or data base development for applicants should be pursued. Turn over of key applicant personnel during the recovery period should be anticipated.	(1)
4. Present disaster recovery is not as cost effective as it should be.	Pursue ways to streamline disaster recovery program to insure cost effectiveness and efficiency. Include milestones, more applicant liaison, and efficient use of computers to speed up the process.	(1)
5. Data processing innovations are not fully relied upon for disaster recovery.	Study ways to better use data processing and computers for the recovery program. Develop data base for applicants and recovery office use.	(1)

\* See Page 74 for KEY

**RECOMMENDATIONS**  
(Continued)

PROBLEM	IMPLEMENTATION MEASURE	AGENCY *
6. Damage Assessment following the Flood of 1984 did not go as smoothly as possible. Problems arose in sharing of information.	Develop a training session on <u>damage assessment</u> for local political jurisdictions; include as a common function in each Local Emergency Operations Plan (LEOP). Development of a computerized data base for use by local governments and the State is needed.	(1)
7. Problems may arise in the processing of Damage Survey Reports (DSR's) in future disasters with FEMA's augmentation of standardized unit pricing and standardized scopes of work.	State should pursue coordination with FEMA's Public Assistance Program to insure state is up-to-date on latest survey techniques. Training sessions should be conducted for state employees used during disaster survey.	(1) (4)
8. Several applicant project files lacked the detail necessary to recap scope of work changes and other matters.	Implementation of standard applicant files, including memos for record, telephone conversations and the like. The more complete the file the easier it is to track what has occurred several years later.	(1)
9. Several applicants waited until project close-out to claim changes in scope of work and other similar costs and lost thousands of dollars due to late claims.	Cost overruns, changes in scope of work and other items should be addressed as early as possible and brought to a resolution. A newsletter or periodic briefing letters should be sent to applicants on a regular basis. This action would tend to alert any new applicant employees to program requirements.	(1)

\* See Page 74 for KEY

**RECOMMENDATIONS**  
(Continued)

PROBLEM	IMPLEMENTATION MEASURE	AGENCY *
10. Although hazard mitigation was stressed as an important issue from the beginning of the disaster, several applicant restoration projects slipped through the system without needed emphasis on reducing the hazard due to lack of funding.	Hazard mitigation should be stressed as one of the most important recovery programs following future disasters. Training and coordination with other state funding agencies should be implemented. The (new) State Hazard Mitigation Council could assist in future disasters in identifying sources of funding, etc.	(1)(5)(6) (7)(8)
11. Problems exist in FEMA program management where 404 permits are required.	FEMA and the Corps of Engineers should resolve the issues that exist between the 404 permit program and the Disaster Assistance Program on the question of eligible costs.	(1)(4) (5)(9)
12. Farmers/ranchers are not fully informed as to their options following a disaster.	An information brochure should be prepared and ready to go to fully explain the options available to the farmers/ranchers (such as how to obtain reimbursement for preventive measures).	(1)(10)
13. A clearer definition of flood fight response criteria for the Corps of Engineers to assist state and local governments should be made available.	A clearer definition of flood fight response for the COE. In some cases the COE were called in later than they should have been. In some cases, the damage had already occurred.	(1)(4)(5) (9)
14. There are currently no documents to assist local governments in such areas as: flood fighting, mitigation, recovery, and preparedness techniques.	Several states have developed informational pamphlets for use by local government. Obtain the necessary information and prepare the pamphlets for use of local officials.	(1)(5)(9) (4)

\* See Page 74 for KEY

**RECOMMENDATIONS**  
(Continued)

PROBLEM	IMPLEMENTATION MEASURE	AGENCY *
15. Several rip-rap projects have proven ineffective in controlling bank erosion.	FEMA and the Corps of Engineers should study various alternatives to rip-rap protection that afford the same protection but are more efficient and cost effective. These should be considered where appropriate in lieu of rip-rap.	(1)(4)(9)
16. During the course of the disaster recovery, several differences of opinion concerning program issues relating to road relocation, water treatment plant relocation, wildlife values, and use of applicant owned borrow pits surfaced.	FEMA should study the issues and develop and publish a standard operating procedure for such problems areas.	(1)(4)

**Key:**

- (1) Colorado Division of Disaster Emergency Services (DODES)
- (2) Colorado Governor's Office
- (3) Colorado Legislature
- (4) Federal Emergency Management Agency (FEMA)
- (5) Colorado Water Conservation Board (CWCB)
- (6) Colorado Department of Local Affairs (DOLA)
- (7) Colorado Department of Health
- (8) Colorado Department of Highways
- (9) U.S. Army Corps of Engineers (COE)
- (10) Colorado Department of Agriculture.

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5 March 1984

CODES

POTENTIAL FLOOD THREAT QUESTIONNAIRE  
(1984 Spring Runoff Period)

As a part of the Spring Seminar Program, DODES will be covering from a State perspective the potential high risk flood threat areas for the Spring runoff period. We would like your evaluation of those specific areas within your jurisdiction which you are concerned about. Additional remarks on any specific preparedness activities you are engaged in or contemplating in regard to these threats would be appreciated.

Jurisdiction Eagle County

1. Potential Flood Threat Areas

Red Cliff, both from Eagle River and Turkey Creek  
East and adjacent to Eagle on the Eagle River  
Gypsum trailer park and Eagle River Estates subdivision  
Frying Pan River upstream from Basalt  
Basalt area, downstream from Emma Bridge

2. Preparedness Activities Related to Flood Threat

Red Cliff has purchased a supply of sand bags.  
Area east of Eagle will be covered by the County sand bag supply.  
Gypsum area will be covered by the Town of Gypsum sand bag supply.  
Frying Pan River upstream from Basalt will be covered by County sand bag supply.  
Basalt area, downstream from Emma Bridge will be covered by Basalt sand bag supply. Also 6 dredging permits have been issued to individuals by the County, to allow removal of material from the Roaring Fork and Frying Pan Rivers which will ultimately lower the water level and reduce the flood danger. This dredging is in operation at this time.

3. Number of Sandbags Presently on Hand in Jurisdiction

Eagle County	1200	VAIL - 800
Red Cliff	200	
Gypsum	200	
Basalt	200	
Total	<u>1800</u>	
	+ 800	
	<u>2600</u>	

Submitted by Jack W. Johnson, Director

Eagle County  
Civil Defense Agency  
P. O. Box 850  
Eagle, Colo. 81631

To be returned by mail prior to 5 April 1984  
Attn: Len Boulas

# STATE OF COLORADO

EXECUTIVE CHAMBERS  
136 State Capitol  
Denver, Colorado 80203  
Phone (303) 866-2471



Richard D. Lamm  
Governor

March 21, 1985

Mr. Alton D. Cook  
Regional Director, Region VIII  
Federal Emergency Management Agency  
Denver Federal Center, Building 710  
Denver, CO 80225

Dear Mr. Cook:

I am pleased to transmit to you Colorado's Flood Hazard Mitigation Program report. On July 27, 1984, a FEMA/State agreement was negotiated pursuant to the President's Major Disaster Declaration (Number FEMA-719-DR) for several Western Slope counties. A major responsibility accepted by the State under Paragraph 10 of the Agreement was to review the status of implementation measures from the current 406 Hazard Mitigation Plan in light of the recent flooding. Where appropriate, the plan was to be modified and updated to address new or additional hazard mitigation needs or issues.

The enclosed report is essentially an expanded and reformatted version of the original plan which was prepared following the Estes Park disaster in 1982. It was written by a steering committee consisting of the State Hazard Mitigation Coordinator from the Colorado Water Conservation Board, Department of Natural Resources, the State Coordinating Officer from the Division of Disaster Emergency Services, and their respective staffs. The steering committee members prepared the body of the report and arrived at a series of conclusions and recommendations that represent their best judgment of the most effective flood hazard mitigation measures. The authors of the report were assisted by an intergovernmental task force organized by the State Hazard Mitigation Coordinator. This approach guaranteed sufficient input from the federal, state, and local government agencies which appear to have potential opportunities for flood hazard mitigation.

The report will be a useful tool in formulating Colorado's budgetary and policy positions regarding flood hazard mitigation. A series of meetings will be held each year to monitor the implementation process. These periodic meetings will form the basis of a state management system for mitigation of flooding and other major hazards that face Coloradans now and in the future.

Sincerely,

A handwritten signature in black ink, appearing to read "Richard D. Lamm".

Richard D. Lamm  
Governor

Enclosure  
cc: Pat Byrne  
David Getches  
Ronald Cattany  
Bill McDonald  
5908



# MEMORANDUM

Department of Military Affairs  
DIVISION OF DISASTER EMERGENCY SERVICES



TO: Richard D. Lamm, Governor, State of Colorado

FROM: John P. Byrne, Director, DODES *John P. Byrne*

SUBJECT: Request for a Presidential Major Disaster Declaration

DATE: 11 July 1984

Richard D. Lamm  
Governor

Brig. Gen. John L. France  
The Adjutant General

John P. Byrne  
Director

Ken Torp  
Sue O'Brien

Attached for your review and consideration is a request package for a Presidential Major Disaster Declaration (Enclosure 2). It is based on the data obtained thus far through a recently conducted State--Federal damage assessment team effort. The damage assessment covers thirteen severely impacted western slope counties and the affected jurisdictions within them including State owned facilities.

This assessment indicates the following:

Public Facility Damage	15,700,000
Agriculture Damage	12,300,000
Private Residential-- Business Damage	5,000,000
<b>TOTAL DAMAGES</b>	<b>33,000,000</b>

In making your review several factors should be considered, the most prominent of which are the financial implications, recovery impacts on both the State and its local governments, and consequent overall environmental deterioration. To highlight these factors, the following is provided.

#### FINANCIAL IMPLICATIONS

The advantage of a Presidential Declaration in this situation is that it will be less costly than if only a State declaration is in force. Our estimates are 3.7 million of state costs and 1.3 million of local costs (total 5 million) with a Presidential (match fund requirements). Without a Presidential we can limit the range of our expenditures, but there is little likelihood of being below 5 million. Probably State and local costs will range between 5 and 8 million. (See Enclosure 1 for cost summary)

RECOVERY IMPACTS AND ENVIRONMENT

With a Presidential declaration a more thorough recovery process will ensue; for example, more thorough debris clearance from rivers and streams and around bridges is a critical need; more money will be available for the clearance process. Local governments are under considerable stress after last year's floods and their money reserves are small and inelastic. As local budgets become more restricted, local ability to manage the overall environment will suffer. Without a Presidential, the State will probably be able to cover only higher priority emergency needs. Without a thorough recovery and full mitigation effort, future costs surrounding flooding can only be magnified.

A summary of impacts is as follows:

A. With a Presidential Declaration

- (1) Majority of impacts will be addressed by federal government.
- (2) Recovery effort will take place in a timely manner.
- (3) Mitigation and the environment will be emphasized during the recovery phase. This broader, more thorough recovery effort will lessen future disaster emergency problems.
- (4) Individual and private business loan, and possibly grant assistance may be provided, if approved, across the complete spectrum of individual assistance programs.
- (5) The broader federal recovery program could prove more costly to the state than expected (match fund requirements) and our control of costs will be limited.

B. Without a Presidential Declaration

- (1) Majority of impacts will fall on local government.
- (2) Recovery effort will be slow and drawn out.
- (3) Many items will not be addressed due to financial constraints.
- (4) (3) above will lead to future disaster emergency or environmental problems of even more severe consequences.
- (5) Individual and private business assistance will be limited or non-existent.
- (6) The heavy local financial impact will provide stimulus for future local mitigation, but the ability to pay for important measures will be severely limited.

MEMO RICHARD D. LAMM, GOVERNOR, STATE OF COLORADO  
PAGE THREE/11 JULY 1984

Based on the above information and that included in the request package, it is my recommendation from a program standpoint that a Presidential Major Disaster Declaration be requested. It is both justified and likely to be approved.

Without such a declaration, the infrastructure and environment of the Western slope will deteriorate, since it is highly unlikely the State (given its budget constraints) will be able to provide adequate financial assistance. This deterioration will affect the quality of life, limit governmental services and contribute to future disaster emergencies in the area.

	<u>YES</u>	<u>NO</u>
1. Approve action as recommended	<u>RDL</u>	_____
2. Desire to discuss in detail with you	_____ 7/16/84	_____ ✓
3. Disapprove action as recommended	_____	_____

(Note in Action 1 and 3 above it will be necessary to discuss with your staff the details involved).

Financial Implications

<u>(1). STATE COSTS</u>	<u>W/O A Presidential</u> (some costs are optional)	<u>W/A Presidential</u> (Costs become an obligation)
A. State agency costs for debris removal, emergency protective measures - repair restoration of damaged facilities not including State Highway System Damage.	2,852,730	713,182
B. State Highway System Road - Bridge Damage.		
With Title 23	481,875	481,875
Without Title 23	1,927,500	1,927,500
C. Disaster Recovery Management Activities	50,000	400,000
D. Individual - Family Grant Program	- 0 -	50,000
E. Cost sharing of Local Government Public Facility Damages (Total Damages - \$11,132,667)	3,000,000 (Emergency Work only) At option of State	1,669,899 (State part of non Federal share - estimated at 15%)
Total	3 - \$8,000,000 depending on Title 23 funding and decision on item E	\$3,314,956 to \$4,760,581 depending on title 23 funding
<u>(2) LOCAL COSTS</u>		
A. Local Government Public Facility Damage	8 - \$11,000,000 depending on what part State picks up in E above.	\$1,113,265 (Local part of non Federal share-estimated at 10%)
B. Disaster Recovery Management Activities	100,000	200,000
Total	8 - \$11,000,000	\$1,313,265

Enclosure 1

Financial Implications

(3)	GRAND TOTAL	Approx. 14 - \$16,000,000	4 - \$6,000,000
	<u>COMBINED STATE LOCAL COSTS</u>	Depending on Title 23	Depending on Title 23

It is noted that these calculations are based on damage assessments. There may be additional damages not yet identified. Additionally actual costs for repair, restoration could be higher than present estimates.



# STATE OF COLORADO

## EXECUTIVE CHAMBERS

136 State Capitol  
Denver, Colorado 80203  
Phone (303) 866-2471



Richard D. Lamm  
Governor

11 July 1984

The Honorable Ronald Reagan  
The President  
The White House  
Washington, D.C. 20500

Through: Alton D. Cook  
Regional Director  
FEMA Region VIII  
Denver, CO 80225

Dear Mr. President:

Under the provisions of Section 301 (b), Public Law 93-288, as implemented by 44CFR 205.41, I request that you declare a major disaster for Colorado, as a result of extensive flooding, mudslides and landslides which began on 14 May 1984 and continued through the latter part of June 1984. The geographic area impacted includes the following counties of Colorado's Western Slope: Moffat, Routt, Rio Blanco, Mesa, Garfield, Montrose, Delta, Gunnison, San Miguel, Ouray, Eagle, and Pitkin. Impacts are attributed to an above average snowfall and consequent high snowpack, an abrupt five day warming trend, and rain storms on already bank full streams and rivers. Part of the impact is also attributed to the severe conditions of the two previous years which resulted in State declared disaster emergencies for several counties; many of which were impacted again this year. Soil moisture and reservoir storage levels were both high at the start of this spring's snowmelt runoff period, due to the above average snowpack and intensive precipitation received during the previous year. Also, this year's early snowfall insulated large areas of ground which is normally frozen, resulting in high soil porosity and saturation as snow melted. This has resulted in numerous mudslides and landslides which impacted both public facilities and private property. The most significant of these slides occurred in the Town of Vail. The abnormally intensive warming trend (well into the ninties for over five days) caused the heavy snowpack to runoff in higher than normal volumes, rapidly filling the major streams and rivers. Rain storms occurring on these streams and rivers caused them to exceed their capacity, flooding many built

The Honorable Ronald Reagan  
Page Two/11 July 1984

up areas and damaging roads and bridges as well as other public and private property. The continuing high flows (both in volume and velocity) lasting through the latter part of June caused considerable bank erosion and stabilization problems along all of the major river basins in the impacted area. These river basins are the Colorado, Yampa, Gunnison, and Uncompaghre and include many smaller tributary streams.

The amount and severity of disaster related damages are broken down by type and preliminary estimates as follows:

Private Residential	\$ 1,774,800
Business	\$ 2,735,800
Agriculture	\$ 12,236,000
Public	\$ 15,727,897

TOTAL \$ 31,462,097

As a result of this situation, I declared a state of disaster emergency on 18 May 1984 for the Town of Silt in Garfield County. I followed this action with subsequent declarations for Mesa, Delta, Montrose, Gunnison and Routt Counties. Based on the damage assessment findings I have also issued a declaration for Moffat, Rio Blanco, San Miguel, Ouray, Eagle and Pitkin counties. Execution of the State Emergency Plan was directed on 18 May 1984. Since that time all appropriate actions directed under State Law have been accomplished. On 18 May 84 the Sacramento Corps of Engineers District was requested to participate under their statutory authority, in those flood fighting activities which were on-going. The corps approved this request and provided much needed technical and resource assistance to supplement the efforts of State and local government during the flood fight.

I have determined that this incident is of such severity and magnitude that effective response is beyond the capabilities of the State and the affected local governments and that supplementary Federal assistance is necessary.

Preliminary estimates of the nature and extent of Federal assistance needed under Public Law 93-288 as amended, are tabulated in Enclosures A and B. Estimated requirements for Federal assistance from certain Federal agencies under other statutory authorities are tabulated in Enclosure C.

The following information is furnished on the extent and nature of State resources which have been or will be used to alleviate the conditions of this disaster:

- (1) The Division of Disaster Emergency Services provided immediate assistance in marshaling State and private sector resources to supplement local resources for emergency action and aid to victims.

The Honorable Ronald Reagan  
Page Three/11 July 1984

- (2) The state issued approximately 100,000 sandbags from its stocks to assist local governments; also, additional sandbags to replenish pre-positioned sandbag stocks were purchased.
- (3) The following expenditures in addition to those for sandbag restocking were made from my emergency fund:
  - (a) Town of Oak Creek -- Water System -- \$25,000
  - (b) Geological advice relative to mudslides and landslides -- provided by the staff of the State Geologist -- \$3,000 (for Vail-Aspen areas)
  - (c) Aerial photography of flood impacted rivers -- \$5,000
  - (d) Montrose County for contractual work performed as part of Emergency Protective Measures -- \$14,000
  - (e) Technical Assistance -- hauling of sandbags provided by State Highway Department -- \$3,000
  - (f) Temporary staff to provide State liaison to Corps of Engineers for flood fighting activities -- \$1,800
- (4) The State Emergency Water and Sewer Fund -- Department of Local Affairs -- made grants in excess of \$90,000 for emergency protective measures to impacted water and sewer utilities.
- (5) The State Highway Department provided and continues to provide technical and resource assistance to impacted communities on emergency protective measures involving roads and bridges, and field expedient dikes and levees.
- (6) Colorado Water Conservation Board and Division of Water Resources in the Department of Natural Resources have provided and will continue to provide technical assistance on evaluating flood threat potential, ascertaining appropriate measures to be taken to address this threat, and identifying long range solutions to the flood problem.
- (7) Office of the State Geologist in the Department of Natural Resources has been involved in evaluating mudslide and landslide threats and recommending emergency protective measures to address these threats. (see para. 4 b)

The Honorable Ronald Reagan  
Page Four/11 July 1984

- (8) The Department of Health has assisted local governments in evaluation of threats to public health, particularly with respect to water and sewer systems.
- (9) The Colorado State Patrol provided assistance to local law enforcement agencies in the areas of traffic control and protection of damaged property as well as providing emergency communications support.
- (10) Many State agencies have been involved in the damage assessment effort to gain a more detailed insight into the severity and magnitude of the impacts. These agencies include Division of Disaster Emergency Services, Departments of Highways, Health, Agriculture, Natural Resources and Social Services; and the Office of State Planning and Budgeting.
- (11) Continued effort on the part of State Government and all of its agencies will be necessary to insure a timely and effective recovery effort.
- (12) Local Governments have been and are continuing to address the disaster impacts to the extent of their resources.

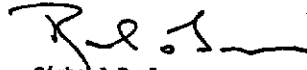
I intend to implement the Individual and Family Grant Program (IFGP) as described in Enclosure A. Sufficient individual disaster related losses exist in the flood area, beyond those which can be covered by other programs, to justify the implementation of IFGP as an element integral to the overall program set forth in this declaration request. I certify the State is unable to immediately pay its 25 percent share of the cost to implement the program and request that the state's 25 percent share be advanced by the federal government. In order to repay this advance, I will consider the following options: a special appropriation from the State Legislature when the next session convenes in January 1985; or extraordinary actions pursuant to the Colorado Disaster Emergency Act. I anticipate the funds will become available and will be repaid to the federal government by 31 December 1985.

This letter also constitutes an official request for the counties mentioned above for: (1) the SBA (Small Business Administration personal/business/economic injury) disaster loan program, and (2) the Emergency Conservation Program (ECP, USDA). Pursuant to Federal Emergency Management Agency regulations, I certify that the total obligations for this major disaster for which no federal reimbursement will be requested are expected to exceed \$2,000,000 in accordance with the table in Enclosure D.

The Honorable Ronald Reagan  
Page Five/11 July 1984

I have designated John P. Byrne, Director of the Division of Disaster  
Emergency Services as the State Coordinating Officer for this request. He  
will work with the Federal Emergency Management Agency in damage assessments  
and may provide further information or justification on my behalf.

Sincerely,



Richard D. Lamm  
Governor

Enclosures A-E





Federal Emergency Management Agency  
Region VIII Denver Federal Center, Building 710 Denver, CO 80225

FEMA-STATE AGREEMENT

July 27, 1984

Honorable Richard D. Lamm  
Governor of Colorado  
State Capitol Bldg.  
Denver, CO 80203

Dear Governor Lamm:

1. On July 27, 1984, the President determined that damages resulting from flooding beginning on May 1, 1984, have caused a major disaster in your State and you hereby acknowledge notice of this declaration. This letter is the FEMA-State Disaster Assistance Agreement for this major disaster, designated FEMA-719-DR, under the Disaster Relief Act of 1974, Public Law 93-288, as amended, 42 USC 5121 et seq. ("the Act"), in accordance with 44 CFR 205.39. Also attached and made a part of this Agreement are:

Exhibit A, Federal Financial Assistance

Exhibit B, A list of State officials authorized to execute certifications and otherwise to act on behalf of the State.

Exhibit C, A copy of your request.

2. Federal assistance will be made available in accordance with the Act, Executive Order 12148, and the implementing regulations found in Title 44 of the Code of Federal Regulations (CFR), as amended, and currently applicable handbooks. You hereby waive any consultation process under Executive Order 12372 and 44 CFR, Part 4, for grants, loans or other financial assistance under Sections 402 and 414 of the Act for this major disaster.

3. Consistent with the requirement that Federal assistance be supplemental, any Federal funds provided under the Act for Public Assistance will be limited to 75 percent of total eligible costs in the designated area.

The remaining 25 percent of eligible costs will be provided as follows:

The State's portion of the non-Federal share will amount to 0% for private non-profit applicants and at least 10% of total eligible costs for local applicants. For State applicants, the State's share will amount to 25% of total eligible costs.

You have certified additional commitments in your request on behalf of State and local governments.

The State and FEMA agree to utilize the Letter of Credit procedures for administration of the Public Assistance Program.

4. No Federal assistance under the Act shall be approved unless the damage or hardship to be alleviated resulted from major disaster which took place from May 1, 1984, through and including June 30, 1984.

5. Federal assistance under the Act and this Agreement shall be limited to the following areas of the State of Colorado, and such additional areas as may be subsequently designated by the Associate Director, State and Local Programs and Support, FEMA ("the Associate Director"):

Public Assistance only: Delta, Garfield, Gunnison, Mesa, Moffat, Ouray, Pitkin, Rio Blanco, Routt and San Miguel Counties.

6. If a State or local government, or eligible private, non-profit organization violates any of the conditions of disaster relief assistance under the Act, this Agreement, or applicable Federal regulations, the Associate Director shall notify the State that additional financial assistance for the project in which the violation occurred will be withheld until such violation has been corrected to the satisfaction of the Associate Director. If the Associate Director is not satisfied with the corrective action taken in response to such notification, then the Associate Director will notify the State that further financial assistance for the project in which the violation occurred will be withheld until adequate corrective action is taken. In addition, the Associate Director may also withhold all or any portion of financial assistance which has or is to be made available to the State, local governments, or eligible private, non-profit organizations for other disaster relief projects under the Act, this or other Agreements, and applicable Federal regulations, until adequate action is taken. The State further agrees that FEMA or State auditors, the Governor's Authorized Representative, the Regional Director, the Associate Director, and the Comptroller General of the United States or their duly authorized representatives shall for the purpose of audit and examination have access to any books, documents, papers and records of any recipients of Federal disaster assistance and of any persons or entities which perform any activity which is reimbursed to any extent with Federal disaster assistance funds distributed under the authority of the Act.



7. No member of or delegate to Congress, or resident commissioner, shall be admitted to any share or part of this Agreement, or to any benefit to arise thereupon; provided, however, that this provision shall not be construed to extend to any contract made with a corporation for its general benefit.

8. The State will establish and maintain an active State program of nondiscrimination in disaster assistance as outlined in 44 CFR 205.16. This program will encompass all State and local government actions pursuant to this Agreement.

9. The State will establish and maintain a program to assure that State and local government recipients of Federal disaster assistance comply with the Department of Housing and Urban Development (DHUD) Consolidated List of Debarred, Suspended and Ineligible Contractors. This program also will encompass all State and local contracts pursuant to this Agreement.

10. The State shall review the status of implementation measures from the current State 406 hazard mitigation plan in the light of the recent flooding, and modify or update such plan as appropriate to address new or additional hazard mitigation needs or issues. The State further agrees:

(A) To submit a report of this program review not later than 180 days after the declaration to the Regional Director;

(B) To follow up with applicants, within State capabilities, to assure that, as a condition for any grant or loan under the Act, appropriate hazard mitigation actions are taken; and

(C) To review and update as necessary disaster mitigation portions of the State emergency plan.


The Regional Director agrees to make Federal technical advice and assistance available to support the planning efforts and actions. The State understands that future Federal disaster assistance may be curtailed in situations where hazard mitigation plans have not been implemented properly.

11. The State will notify all State and local agencies and local governments within the areas defined by this Agreement of the time limitations agreed to herein and the terms and conditions of eligibility for Federal assistance.

12. The State agrees, on its behalf and on behalf of its political subdivisions and other recipients of Federal disaster assistance, to cooperate with the Federal Government in seeking recovery of funds which are expended in alleviating the damages and suffering caused by this major disaster against any party or parties whose acts or omissions may in any way have caused or contributed to the damage or hardship for which Federal assistance is provided pursuant to the Presidential declaration of this major disaster.

FEMA-State Agreement  
July 27, 1984  
Page 4

13. This Agreement may be amended at any time by written approval of both parties.

Sincerely,  
  
John D. Swanson  
Disaster Recovery Manager

Attachments

Agreed:

  
Governor

8-1-84  
Date

EXHIBIT A

FEDERAL FINANCIAL ASSISTANCE

- (1) General. The Director of the Federal Emergency Management Agency, or his delegated representative, shall make available such amounts as he/she finds necessary for Federal disaster assistance within the limits of funds available from Congressional appropriations for such purposes pursuant to the Act, Executive Order 12148, and applicable Federal regulations.
- (2) Audit.
  - a. The State will maintain a complete listing of locations where each applicant's records, including the original documentation supporting each claim, may be audited by the Federal auditors. The original documentation shall be retained for a period of not less than three (3) years from the date of final payment, except that in the case of small project grants (project applications under \$25,000), original documentation shall be retained for a period of not less than three (3) years from the date of submission by the applicant to FEMA through the State of the listing of approved projects showing completion of all work, disposition of any remaining funds, and certification by the applicant as required by 44 CFR 205.
  - b. The State shall perform site audits and other reviews as are necessary to a certification by the State of each claim arising from an approved project under this disaster. The State official authorized to make such certification in connection with the performance of audit functions is designated in Exhibit B of this Agreement. Such audits will be performed in accordance with audit guides provided by the FEMA Inspector General and by the General Accounting Office Standards and Office of Management and Budget Uniform Requirements for Grants to States and Local Governments Compliance Supplement.
- (3) Advances and Letters of Credit. When requested in writing by the Governor or his authorized representative, funds may be advanced to the State for approved individual project applications. The State request will recommend the amount of each advance for approved project applications. However, the maximum amount to be advanced on each project application will be determined by the Regional Director of the Federal Emergency Management Agency or his delegated representative having responsibility for such actions. In requesting advances, the State thereby agrees to the following terms and conditions which shall govern all such funds advanced:
  - a. That funds will be deposited in a manner that maintains their identifications as disaster relief funds subject to withdrawal only upon certification of the Governor's Authorized Representative (GAR).

b. That the funds advanced shall be used solely for the approved project application for which an advance was requested.

c. That the State will, upon receipt of the advance or advances, immediately readvance to the applicant the amount approved by the Regional Director or his/her designee for such applicant.

d. That the State will establish and maintain accounting records, which will be subject to Federal audit, containing the following:

1. The amount of each advance to the State;
2. The amount of funds advanced to each applicant, including the check number, amount, date and individual payee.

e. That the State will, with respect to its own disaster assistance applications, maintain records which identify adequately the source and application of Federal disaster assistance funds for FEMA-supported activities, along with accounting records which are supported by adequate source documentation. In addition, the State will, with respect to the disaster assistance applications of other governmental entities and of eligible private non-profit entities, require that such grantees maintain records which identify adequately the source and application of Federal disaster assistance funds for FEMA-supported activities, along with accounting records which are supported by adequate documentation.

f. That the State official responsible for the custody of the funds shall be a bonded official or, if other than a bonded official, assurances of satisfactory surety shall be provided.

g. That within 90 days of completion of each project for which advances were made from the fund for costs approved for that project, the State will furnish duly executed vouchers (in quadruplicate on United States Government Standard Form 90-27) accompanied by such itemized and substantiated documentation as the Federal Government may require.

h. That any and all funds advanced to the State for individual project applications which are in excess of the approved, actual expenditures as accepted by final audit of each project by the State and/or Federal Government shall be refunded by the State by check drawn payable to the Federal Emergency Management Agency. If it becomes evident that timely refunds will not be made by the State, the Federal Emergency Management Agency shall apply the claims collection procedures outlined in Title 44, CFR Part 11, Subpart C and further described in the claims collection regulations of the General Accounting Office and the U.S. Department of Justice.

i. That in the event that advances to grantees and subgrantees under this Agreement are accomplished by the use of Letters of Credit, the State commits itself to (a) initiating cash drawdowns only when actually needed for its disbursements, (b) maintenance of adequate accounting controls over Letters of Credit and advances of Federal funds, (c) timely reporting of cash disbursements and balances as required by the Federal Emergency Management Agency, and (d) the imposition of the same standards of timing and amount upon any secondary recipient organizations, including the furnishings of reports of cash disbursements and balances, with the understanding that failure to adhere to these provisions may cause the unobligated portion of the Letter of Credit to be revoked by the Federal Emergency Management Agency or by the Department of the Treasury.

(4) Reimbursements.

a. If no advance is made, reimbursement to the State for approved costs shall be made upon the presentation by the State of duly executed vouchers in accordance with paragraph 3(g) above.

b. If actual expenditures approved by the Federal Government exceed a partial advance made for an approved project application, the balance not covered by the advance will be paid to the State upon presentation by the State of duly executed vouchers in accordance with paragraph 3(g) above.



EXHIBIT B

STATE CERTIFICATION OFFICERS

- (1) The Governor hereby certifies that LEONARD A. BOULAS is the Governor's Authorized Representative (GAR) empowered to execute on behalf of the State all necessary documents for disaster assistance including certification of applications for public assistance. WILLIAM S. MARTIN is the Alternate Governor's Authorized Representative and is similarly empowered. Their specimen signatures follow:

GAR

Alternate GAR

- (2) The Governor's Authorized Representative, who is named above, is responsible for State performance of hazard mitigation activities under this Agreement. Further, WILLIAM P. STANTON is designated the State Hazard Mitigation Coordinator for the purposes of such hazard mitigation activities.
- (3) The Governor hereby certifies that JOHN P. BYRNE and WILLIAM S. MARTIN are the State Coordinating Officer (SCO) and Alternate State Coordinating Officer respectively, who will act in cooperation with the Federal Coordinating Officer under this declared major disaster.
- (4) The Governor hereby certifies that site audits and certifications as referenced in Exhibit A shall be the responsibility of ROBERT J. SCOTT who shall arrange for the performance of such audits and who shall execute all such certifications on behalf of the State.
- (5) The Governor hereby certifies that DAVID H. LAWTON is the representative of the State authorized to receive donations or loans of surplus property on behalf of the State and to execute certification, agreements and other necessary documents with regard thereto.
- (6) The Governor hereby certifies that LEONARD A. BOULAS is the official of the State authorized to execute compliance reports, carry out compliance reviews and distribute informational material as required by the Federal Emergency Management Agency to assure that all recipients of Federal disaster assistance are in full compliance with FEMA nondiscrimination regulations. [located at 44 CFR 7.]

- (7) The Governor hereby certifies that LEONARD A. BOULAS is the official of the State who will execute compliance reports, carry out compliance reviews, and distribute informational material as required by the Federal Emergency Management Agency (FEMA) to assure that all recipients of Federal disaster assistance are in compliance with the United States Department of Housing and Urban Development List of Debarred, Suspended and Ineligible Contractors.





## RECORD KEEPING

### PURPOSE:

In the aftermath of disaster there is a particularly strong need to keep accurate records of expenditures and other actions taken in order to insure maximum reimbursement for losses and expenses incurred in the recovery process. This section describes the necessary steps in record keeping and includes suggested forms which, if fully utilized, should provide an adequate basis for expenditure substantiation.

### CONCEPT:

Proper and accurate supporting documentation is a "must" in order to insure that local governments receive the maximum financial reimbursement for authorized disaster emergency related expenses and losses. It is almost impossible to document claims after the work has been done and a period of time has passed. Officials must determine who is going to keep the records and insure that proper training has taken place. It must be known what records are needed and how they are to be maintained. And most important of all, officials must insure that records are kept immediately upon response to or recovery from a disaster emergency situation. These situations have a way of rapidly expanding, and it is too late to go back and create records that should have been kept from the onset. Public officials who are to use the system must be indoctrinated, so that they are at least familiar with it.

### RECOMMENDED LOCAL ROLE:

There are basically three ways in which disaster emergency work can be accomplished by local governments. These are force account (own forces), contract, and direct federal assistance. Local governments may utilize each or all of these programs. Each is discussed in the following pages. It is important to note that local governments should not over commit themselves by using force account work only.

#### Force Account Work

Force account work is that work accomplished through utilization of one's own personnel, equipment, and supplies. In the majority of cases in the past, this has been the type of work which has caused greatest problems from the documentation standpoint. Because of this, the documentation requirements are quite involved and necessarily require that someone be designated and trained to handle the record keeping. Someone must start keeping the necessary records immediately upon the onset of a disaster emergency situation. If the resources of another city or county are used to perform the work (example: Larimer County for the City of Loveland) the same documentation is required as if the resources were that agency's

own. There must be an invoice showing what has been paid that city/county. This invoice must show the date, and amount paid, check or warrant number, or evidence of cash payment. Within force account work there are three areas which must be documented in detail. These are payrolls, equipment use (either applicant owned or rented) and materials used. In each case, these must be tied to a specific damage site and item number on the project application. This necessitates the establishment of a separate folder for each damage site/work project, as soon as they are identified so that all pertinent data relative to that site can be filed in one place for future reference. Realizing that a single employee may work on more than one site in one day and that he may use different types of equipment and materials on each of the sites, an Individual Daily Report Form covering time, equipment, and materials has been designed to assist in keeping track of the actual work performed at each individual site he works on. These forms should be turned into the foreman for verification and then turned over to the person designated to keep the folders for each site. Information from these reports is then to be transposed to the consolidated forms for Payrolls, Equipment, and Material described later. For local use, it is suggested that the forms described be reproduced in a color different from that normally used so that they may be readily identified as forms associated with disaster emergency situations.

FORCE ACCOUNT PAYROLL

Payroll records must show as a minimum the pay period, name, job classification, number of hours worked each day, total hours worked each pay period, rate of pay, (regular or overtime) total earning, and paycheck number.

Records must additionally indicate which job site the employee was working on each hour of the day, if he worked on more than one job site in a single day.

Information from the Individual Daily Report Forms should be extracted and consolidated on the Payroll Record Form. This will enable the official to show exactly who did what, when and for how long on each job site. This should be done at least once a week. Payroll Record Forms should be kept in the appropriate folder for the work site.

<b>COMPLETE ONLY AFTER MAJOR DISASTER DECLARATION</b>														<b>FORCE ACCOUNT PAYROLL RECORD</b>				PAGE _____ OF _____ PAGES	
FEMA- _____ -DR																		TIME PERIOD: _____ TO _____	
PROJECT APPLICATION NO.: _____														_____ 19 _____		JOB SITE NO.: _____			
CATEGORY OF WORK: _____				LINE ITEM: _____				LOCATION: _____											
NAME	JOB CLS.	DATE												TOTAL HOURS	RATE	TOTAL PAY	PAYCHK. NUMBER		
		HOURS WORKED EACH DAY																	
CERTIFIED BY: _____ TITLE: _____														TOTAL HOURS		TOTAL PAY			

**FORCE ACCOUNT EQUIPMENT**

Documentation for applicant owned and rented equipment must show the equipment type and description, date used, hours used each day, total hours used, rate per hour (indicating with or without operator), total cost for each item and total cost of all equipment used.

For rented equipment, the official must also show the date and amount paid and check number or evidence of cash payment. A copy of the rental agreement must be maintained in the work site file and this agreement must specifically state who is responsible for all repairs to the equipment.

Rates used on applicant owned equipment must be no more than those on HUD's "Schedule of approved Applicant - Owned Equipment Rates." DODES will provide these on request.

Information from the Individual Daily Report Forms should be extracted and consolidated on the Equipment Record Form. A separate vendor invoice file which contains copies of all rental agreements and invoices from equipment vendors should be established, if rental equipment is used. It is important to remember that all equipment used on a work site must be recorded daily on either the Equipment Record Form for Owned Equipment or the Equipment Record Form for Rented Equipment.

COMPLETE ONLY AFTER MAJOR DISASTER DECLARATION		<b>FORCE ACCOUNT EQUIPMENT RECORD</b>		PAGE _____ OF _____ PAGES													
FEMA- _____ -DR				TIME PERIOD: _____ TO _____													
PROJECT APPLICATION NO.: _____				19 _____													
CATEGORY OF WORK: _____		LINE ITEM: _____		LOCATION: _____													
				JOB SITE NO.: _____													
TYPE OF EQUIPMENT	EQUIP. NO. REFERENCE	DATE												TOTAL HRS.	RATE	TOTAL COST	
		HOURS USED EACH DAY															
												TOTAL HRS.	TOTAL COST				
CERTIFIED BY: _____												TITLE: _____					



C. Contract Work

There are two types of contracts which may be used: lump sum and cost. If a lump sum contract is used, an invoice and a copy of the contract is needed. If a cost contract is used, not only is a copy of the contract and an invoice needed, but additionally, a detailed breakdown of the cost, including dates, location of work, types of equipment, hours and hourly rate is required. This requirement should be specified in the contract. In addition to these requirements, the applicant (local government) must show on each invoice the date and amount paid, check or warrant number or evidence of cash payment. Evidence of contract advertisement, bidders and selection of low bid contractor should also be retained. (NOTE: If only one bidder is available in the area, this fact should be noted by memorandum when issuing the contract.) All federal and state regulations pertaining to non-discrimination, fair labor standards, antikickbacks and debarred contractors shall be complied with. Cost-plus contracts can be rarely justified and in no event shall a cost-plus-percent of cost contract be approved. For removal of wreckage and debris clearance, fixed price or unit price contracts are preferred over equipment rental or hourly rate contracts because they are generally less expensive. All negotiated contracts of over \$10,000 shall include a provision that the applicant, <sup>FONA</sup> ~~MSB~~, comptroller General of the U.S. or any of their authorized representatives shall have access to any books, documents, papers and records of the contractor which are directly pertinent to the contract for a period of three years after the last payment under the contract.

D. Direct Federal Assistance

If emergency work is beyond the capability of a local government applicant and that of the state and if a political entity is unable to contract for the work, this work may be accomplished by federal agencies. Normally, permanent restoration work will not be provided by direct federal assistance, but this will be decided on a case by case basis. Requests for direct federal assistance should be made by local governing bodies in the form of a resolution, through the Governor's Authorized Representative to the FDAA Regional Director for approval. These requests are to be submitted (separately from project applications) and must be accomplished by:

1. A certification of local government resolution.
2. A statement outlining the reasons why the work cannot be done by the applicant.
3. An assurance by the applicant of compliance with regulation 5, Civil Rights, Federal-State Disaster Assistance Agreement and 2205.15 Duplication of Benefits 24C FR.

If approved, the applicant is responsible for assisting the performing federal agencies in all support and local jurisdiction matters that a private owner would assume in his relationship to a performing contractor. For all work performed by federal agencies, the state or local government must provide without cost to the federal government all land easements and right-of-ways necessary for accomplishing the approved work, and must agree to indemnify the federal government against any claims arising from the work. Sample copies of local resolution and certification are attached. Experience has shown that

this method of work is seldom used, although in a few cases it is the only method available to a local community to get a specific type of work accomplished. The Governor's Authorized Representative will assist local governments in preparing requests for direct Federal assistance.



4. SUMMARY

In summary, it is noted that each local government must review its own record keeping procedures and determine if they are adequate to insure the maintenance of necessary records to support disaster emergency operations. The procedures contained in this annex portray a recommended system which will insure that full documentation will be maintained in such a way as to be useable in supporting disaster emergency claims for reimbursement. Regardless of what system is used, the requirement for full, understandable documentation exists, as part of the audit procedure. Realizing that no system is without its strengths and weaknesses, you are encouraged to comment on this system in the hopes of improving upon it. You are also encouraged to modify it for local use. The one overriding criterion is a timely, orderly, functional system for maintaining records directly related to disaster - emergency response and recovery operations, so that you can insure that your community receives the maximum amount of financial reimbursement to which it is entitled.

# MEMORANDUM

Department of Military Affairs  
DIVISION OF DISASTER EMERGENCY SERVICES



TO: All Public Assistance Applicants (FEMA-719-DR-CO)

FROM: Bob Wold, Bob Kistner Public Assistance Officers

SUBJECT: Summary of Documentation

DATE: March 14, 1985

Richard D. Lamm  
Governor  
Reg. Gen. James Frank  
The Adjutant General  
John F. Hoover  
Director

Attached are example "Summary of Documentation" forms for you to use as a guide in preparing your own summaries. A Summary of Documentation must be completed for each Damage Survey Report in your Approved Project Application. Remember, this form is essential if you want to be reimbursed for your disaster recovery work.

After you have completed the work in each damage category, prepare a Summary of Documentation for each Damage Survey Report using the format shown on the attached examples and guidelines given below.

- (A) Fill in the Applicant name and the Project Application Number at the top of each Summary of Documentation.
- (B) Fill in category letter, DSR Number, Approved DSR Amount, and a brief description/comment of work authorized on the DSR.

This information can be obtained from the Engineering Analysis Sheet in your Approved Project Application. Prepare a separate Summary of Documentation for each Damage Survey Report (DSR) listed on the Engineering Analysis Sheet.

- (C) Show the date(s) the work was performed, not the date of the final payment. You may have a span in dates, but make sure the dates shown are within the work deadlines as shown on the Engineering Analysis in your Approved Project Application. When all work has been completed at that DSR site, enter the last date on this line.
- (D) List your voucher, check, claim or reference numbers. This information is necessary as it provides an audit trail of your disaster recovery work costs.
- (E) If the work was done by your own work force and equipment (Force Account) list all labor, equipment and material costs. All applicants owned equipment must be identified by size, model, horse power, etc. and the authorized rate from the current Federal Emergency Management Agency schedule of equipment rates.

- (F) If the work was done by contract, list the contractors name, and other associated costs; i.e. legal advertisement, engineering services, etc.
- (G) List the total cost you incurred in completing the work as shown on the approved DSR.

After the completion of the Summary of Documentation(s) for each Work Category submit a copy to this office. After receipt of the Summary of Documentation(s) we will arrange for the final inspection(s), if necessary, by Work Category.

Just a final reminder, make sure that you include all costs of your restoration work on the respective Summary of Documentation, since this is the form the Auditor will use in your audit and to determine the amount of your final payment.

For additional information, please contact Mr. Robert Kistner or Robert Wold, of my Staff, at 245-9761.



# State of Colorado

DEPARTMENT OF PUBLIC SAFETY  
DIVISION OF DISASTER EMERGENCY SERVICES  
CAMP GEORGE WEST  
GOLDEN, COLORADO 80401



## SUMMARY OF DOCUMENTATION IN SUPPORT OF AMOUNT CLAIMED FROM THE FEDERAL EMERGENCY MANAGEMENT AGENCY FOR ELIGIBLE DISASTER WORK

APPLICANT Macon County PA NUMBER 100-00000  
 SITE NUMBER (DSR) 0001 DATE WORK COMPLETED 6/22/79  
 CATEGORY C APPROVED DSR AMOUNT \$ B

Applicant's Reference No. Warrant, Voucher, Claim	Delivery date of articles or performance of services	DOCUMENTATION List documentation (Applicant's payroll, material out of applicant's stock, applicant owned equipment and name of vendor or contractor) by category and line item in the approved project application and give a brief description of the articles or services.	AMOUNT			
			Line item in Approved Project Application	Applicant's Eligible Cost		
				Dollars	Dollars	Cents
Payroll 9280 9281 9284 9285 eck 369 369 412 426 451	6/18/79 thru 6/22/79	Item 0001 replace culvert, embankment, gravel, riprap	\$,226.00			
		John Deere 410 Backhoe	12 hrs. @ \$22.00	\$	264.	00
		Operator	12 hrs. @ 6.29		75.	48
		D-8 Cat	8 hrs. @ 35.00		280.	00
		Operator	8 hrs. @ 5.18		41.	44
		6 Yd Truck 2T	16 hrs. @ 12.50		200.	00
		Operator	16 hrs. @ 4.58		73.	28
		6 Yd Truck 2T	16 hrs. @ 12.50		200.	00
		Operator	16 hrs. @ 4.58		73.	28
		42' x 48" new CMP @ \$26.00/ft.			1,092.	00
		1 - 48" x 24" new band @ \$50.00			50.	00
		80 yds. gravel @ \$4.00/yd			200.	00
		200 yds. embankment @ \$1.00/yd			200.	00
		40 yds. riprap @ \$12.00/yd			480.	00
		TOTALS =			\$3,226.00	\$ 3,229.

SAMPLE

FEDERAL EMERGENCY MANAGEMENT AGENCY  
 DAMAGE SURVEY REPORT  
 DISASTER RESPONSE AND RECOVERY  
 (See instructions on reverse)

3. DECLARATION NO.  
 FEMA 719

4. INSPECTION DATE  
 8/10/84

5. WORK ACCOMPLISHED BY  
 CONTRACT  
 FORCE ACCOUNT

REGION 8 FEDERAL EMERGENCY MANAGEMENT AGENCY

APPLICANT (State Agency, County, City, etc.)  
 Mason County

FA NO.  
 100-00000

WORK CATEGORY (X Applicable Box)  
 EMERGENCY  A  B  
 PERMANENT  C  D  E  F  G  H  I

DSR NO.  
 24721

6. PERCENTAGE OF WORK COMPLETED TO DATE  
 95%

8A. FACILITY IN OR AFFECTS FLOOD PLAIN OR WET LANDS  
 YES  NO

DAMAGED FACILITIES (Location, identification and description)  
 Culvert & Roadway washout - 24' Gravel County Road 9 - 2 1/2 miles W of SH 48 N. Branch of Whiskey Creek -

DESCRIPTION OF DAMAGE  
 Debris plugged the culvert - Flood water overtopped the roadway & washed out embankment and the culvert. Embankment destroyed. Embankment 30'W x 4' D x 45' L AVG. - Gravel on new emb 4" x 45' L x 25' W. (the gravel loss 2" x 25' x 400' - Riprap 60 x 3 x 4' 2' x 20 x 15'

SCOPE OF PROPOSED WORK  
 Replace embankment. 200 c.y. - Replace 2' x 48" CMP (one band) Replace gravel - 75 cubic yds - Place 40 cu yds riprap - (See detail)

11. ESTIMATED COST OF PROPOSED WORK

QUANTITY (a)	UNIT (b)	MATERIAL AND/OR DESCRIPTION (c)	UNIT PRICE (d)	COST (dollars) (e)
200	c.y.	Embankment - In Place	4.50	900-
42	L.F.	48" CMP - (one band) - In Place	35-	1470-
75	c.y.	Gravel - 3/4" - In Place	5-	375-
5	c.y.	Pipe Bedding -	4-	20-
40	c.y.	Riprap - In place	15-	600-
SAMPLE				

EXISTING INSURANCE (Type) \_\_\_\_\_ AMOUNT \$ \_\_\_\_\_ TOTAL \$ 3365-

RECOMMENDATION BY FEDERAL INSPECTOR (Signature, Agency, date)  
 Dexter Rhodes FEMA 8/10/84

CONCURRENCE IN REPORT BY STATE INSPECTOR (Signature, Agency, date)  
 Rodney P. G. C-DOH 8/10/84

CONCURRENCE IN REPORT BY LOCAL REPRESENTATIVE (Signature, Agency, date)  
 Tom Blademan Mason Co Rd Dept 8/10/84

FEDERAL REVIEW (Signature, Agency, date)  
 W. R. Lawrence FEMA 8/15/84; R.E. 8/18/84

ELIGIBLE  YES  NO ATTACHMENTS Maps & Photos

CONCUR  YES  NO ATTACHMENTS

CONCUR  YES  NO ATTACHMENTS

COMPLETE ONLY AFTER MAJOR DISASTER DECLARATION

FDA# - \_\_\_\_\_ - DR

PROJECT APPLICATION NO.: 100-00000

CATEGORY OF WORK: C LINE ITEM: \_\_\_\_\_

FORCE ACCOUNT  
PAYROLL  
RECORD

PAGE \_\_\_\_\_ of \_\_\_\_\_ PAGES

TIME PERIOD: 8-18 to 8-22 19 84

LOCATION: MACON COUNTY

JOB SITE NO.: 001

NAME	JOB CLS. #	DATE												TOTAL HOURS	RATE	TOTAL PAY	PAYCHK. NUMBER	
		HOURS WORKED EACH DAY																
JONES, BILL	0	8/18	8/19	8/20	8/21	8/22									12	8.50	102.00	9280
Smith, PETE	0	8/18	8/19	8/20	8/21	8/22									8	8.50	68.00	9281
COUSIN, JOE	0	8/18	8/19	8/20	8/21	8/22									16	6.50	104.00	9284
PROUD, I.M.	0	8/18	8/19	8/20	8/21	8/22									16	6.50	104.00	9285

CERTIFIED BY: Wanda Beck

TITLE: Taxi Clerk  
County Roads

TOTAL HOURS: 52 TOTAL PAY: 378.00

APPENDIX D







# MEMORANDUM



DIVISION OF DISASTER  
EMERGENCY SERVICES  
Camp George West  
Golden, Colorado 80401  
(303) 273-1624

John P. Byrne  
DIRECTOR

DATE: 1 January 1987  
TO: John P. Byrne, Director  
FROM: *Leonard A. Boulas*  
Leonard A. Boulas, Governor's Authorized Representative  
SUBJECT: Disaster Assistance Program Status Report  
Presidential and State Declared Disasters

## 1. Presidential Declared Disasters

### A. FEMA-719-DR- Western Slope Flood 1984

Provided as attachments are copies of the most recent financial and program status reports for this disaster. Work effort is continuing on processing of final claims and project application close out. DODES temporary hire disaster recovery staff (1 professional, 1 clerical) have been extended, until 31 March 1987, to assist in the project application close out process. Presently 33 of 70 applications have been closed out, 18 additional are presently at FEMA Region VIII for final review, with the remaining 19 in various stages of close out between the applicant and DODES. The majority of financial reviews by the DPS have been accomplished with 4 anticipated ones still programmed to be accomplished. FEMA Region VIII is giving priority to closing out the final claims packages they have from Colorado.

### B. FEMA-665-DR- Lawn Lake Disaster

Two project applications are still open under this disaster - State Division of Wildlife and Town of Estes Park. Division of Wildlife's final claim package, is at DODES scheduled for a final State program review and submittal to FEMA Region VIII. Town of Estes Park's request for flexible funding option is still pending FEMA National approval. In the interim FEMA Region VIII has reviewed all costs related to work completed to date and resolved what are FEMA eligible costs. In this regard, I met with Roger Free, FEMA Region VIII in mid-December to go over these figures. It was decided at this meeting, we could close out Category A + B (Emergency Work) since this would not impact on the flexible funding proposal, and at the same time request an additional advance of funds based on the State's recommended eligible costs. FEMA would adjust this request figure based on their calculations of eligible program costs.

It is presently contemplated that both of the above actions can be completed by the end of January.

dps  
COLORADO  
DEPARTMENT OF  
PUBLIC SAFETY

John P. Byrne, Director  
1 January 1987  
Page 2

2. State Declared Disaster  
No action pending - all State Declared Disasters closed out.

3. General  
DODES Disaster Recovery Staff (State Coordinating officer, Governor's Authorized Representative and Public Assistance Officer) will attend a FEMA Region VIII Disaster Recovery Conference schedule for February. The conference will bring together representatives from all of the States in Region VIII to discuss Disaster Recovery issues and lessons learned. This is the first conference of this type in over two years and will give the States the opportunity to provide feedback on the Disaster Assistance Program.

With the coming session of Congress it is likely that amendments to Public Law 93-288 (Federal Disaster Relief Act 1974) will again be considered. It is anticipated that the States will take a much more proactive role in this process through the auspices of NEMA. Attempts at amending this law have been unsuccessful in the past, due to the complexity and controversial nature of the issues involved and lack of a concensus on these issues.

Attachments: Financial Status Report - FEMA-719-DR  
Program Status Report - FEMA-719-DR

LB/aj  
LB46

PROJECT APPLICATION STATUS REPORT #1  
FORM 419-08 DATE 12/31/06

APPLICANT	APPROVED PA AMOUNT	FEDERL SHARE	STATE SHARE	APPLICANT SHARE	FEDERAL ADVANCES TO DATE			STATE ADVANCES TO DATE			FINAL PROJECT CLOSE OUT DATE	FEDERAL SHARE	FINAL STATE SHARE	APPLICANT SHARE	FINAL PROJECT TOTAL
					AMOUNT	NUMBER	AMOUNT	NUMBER	AMOUNT						
Delta County	26421.00	21516.50	20697.20	47023.30	1	11424.00	1	14246.00				0.00	0.00		
Panola	157555.00	118154.25	15755.50	21633.25	4	55061.00	1	8457.00				0.00	0.00		
Delta, City	246505.00	104780.75	24650.50	36375.75	5	133422.00	2	17705.00				0.00	0.00		
Delta-Montrose Electric Assoc.	81209.00	45966.75	0.00	15327.25	1	14775.60	1	4597.00				0.00	0.00		
Tri-County Water Conservancy Dist.	1363.00	1027.25	126.30	234.45	1	1622.60	1	126.00	8 Aug. 05	1022.00	126.00	795.00	1263.00		
Waltham Sanitation Dist.	31174.00	24929.20	3117.40	3117.40	1	525 24940.00	1	3117.00	16 Sept. 05	525 24940.00	3117.00	3117.00	31174.00		
Bellevue County	26061.00	27645.75	3046.10	9529.15	1	20735.00	1	2765.00				0.00	0.00		
Logan County	97940.00	12126.00	9794.00	14695.20	1	55107.00	1	6440.00				0.00	0.00		
Wash	124261.00	93270.75	12426.10	14651.15	1	69953.00	1	5277.00				0.00	0.00		
Red Cliff	6972.00	5279.00	697.20	1045.00	1	5279.00	1	697.20	12 Aug. 05	5279.00	697.20	1045.00	6972.00		
West Valley Council-Related Water Dist	15190.00	11298.50	1519.00	2279.70	1	1519.00	1	1519.00	26 July 05	11298.00	1519.00	2280.20	15190.00		
Beault-Sourthern District	877.00	657.75	87.70	131.55	1	658.00	1	87.70	26 July 05	658.00	87.70	131.30	877.00		

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**APPENDIX F**

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# MEMORANDUM

Department of Military Affairs  
DIVISION OF DISASTER EMERGENCY SERVICES



TO: All Public Assistance Applicants

FROM: William S. Martin, Governor's Authorized Representative,  
Alternate State Coordinating Officer *WSM*

SUBJECT: FEMA-719-DR-Colorado

DATE: September 24, 1984

Richard D. Lamm  
Governor

Wing Gen. John L. France  
The Adjutant General

John P. Basso  
Director

Enclosed are Summary of Documentation forms and Blanket Certificate forms to close out the 1984 flood disaster project mentioned above and process your final disaster claim for reimbursement.

The Blanket Certificate is to be completed for the whole project; only one is required. A Summary of Documentation, however, must be completed for every eligible site, so there will be one Summary of Documentation for each eligible DSR. Please submit the Summary of Documentation indicating totals and costs in summary form (as in the sample already provided). It will not be necessary to attach copies of records or back-up documentation to the Summary of Documentation as they will be examined by the Auditor on site as a part of the auditing process. All bills, time sheets, equipment records, etc., must be itemized or summarized on the Summary of Documentation form. The records and back-up documentation for each eligible project should be retained in your office for a minimum of three years following completion of all work.

The Summary of Documentation forms should be prepared by category of work as each is completed and submitted to this office at that time or upon completion of all work. If completion of one or more projects will require an extended time period, then return all documentation for completed projects so that reimbursement for these projects is not unduly delayed.

Upon receipt of the Blanket Certificate, we will notify the inspecting agency so that a final inspection (if required) can be made and a State audit performed. When the audit is completed, final payment will be made.

If you should need additional forms or explanation, please contact Robert Kistner or Robert Wold of my staff.

WSM/jm

# MEMORANDUM

Department of Military Affairs  
DIVISION OF DISASTER EMERGENCY SERVICES



TO: All Public Assistance Applicants (FEMA-719-DR-CO)

FROM: William S. Martin, Governor's Authorized Representative,  
Alternate State Coordinating Officer *W.S.M.*

SUBJECT: Supplemental Advances of Funds

DATE: September 24, 1984

Richard D. Lamm  
Governor

Brig. Gen. John L. France  
The Adjutant General

John C. Baxton  
Director

Enclosed please find a sample letter for you to use in making requests for additional advances of funds. Applicants should consider eligible costs to date in addition to reasonable estimates of what eligible work will be performed over the next thirty days. Please note that the total sum of all advances cannot exceed 75% of the Federal share of your approved Project Application.

We anticipate that it will take approximately ten working days from receipt of your request before a check is issued.

WSM/jm

SAMPLE LETTER

SUBJECT: REQUEST FOR FURTHER ADVANCE OF FUNDS

TO: Governor's Authorized Representative  
Division of Disaster Emergency Services  
Camp George West  
Golden, CO 80401

FROM: (Name of Applicant) (Example: Delta County)

DATE: (Date of Requested Advance)

We understand that the initial advance of funds in the amount of \$ \_\_\_\_\_ was intended to cover 75% of the Federal share of the work which had been completed at the time the Project Application was approved.

Now we request an additional advance of funds, based on the following information:

Amount of approved Project Application \$ \_\_\_\_\_  
Amount spent on approved work to date \$ \_\_\_\_\_  
Estimated amount to be spent next 30 days \$ \_\_\_\_\_  
Estimated amount to be spent within 60 days \$ \_\_\_\_\_

We understand that the maximum that can be advanced is 75% of the Federal share of the approved Project Application.

Sincerely,

\_\_\_\_\_  
Authorized Representative

dps

COLORADO  
DEPARTMENT OF  
PUBLIC SAFETY

COLORADO STATE SHARE  
ADVANCE OF FUNDS  
CALCULATION SHEET  
FEMA-719-DR

John P. Byrne, Director  
Division of Disaster  
Emergency Services

APPLICANT \_\_\_\_\_ DATE \_\_\_\_\_

ADDRESS \_\_\_\_\_ ZIP \_\_\_\_\_

PROJECT APPLICATION (P.A.) NUMBER \_\_\_\_\_

Cash required for approved work based on Summaries of Documentation (SOD's) received (Use actual costs or DSR approved amounts, whichever is less).

- 1. Summaries of Documentation (SOD's) Received \$ \_\_\_\_\_
- 2. Amount of Federal Approved P.A. (100%) \$ \_\_\_\_\_
- 3. Lesser Amount of Line 1 or Line 2 \$ \_\_\_\_\_
- 4. State of Colorado Share (Line 3 x 10%) \$ \_\_\_\_\_
- 5. Maximum Eligible Advance (Based on line 3 amount)  
\$ \_\_\_\_\_ x 75% \$ \_\_\_\_\_  
(Line 4)
- 6. Minus Previous Advance \$ \_\_\_\_\_
- 7. Advance Requested \$ \_\_\_\_\_

COMMENTS:

- ...1st. Advance.....
- ...2nd. Advance.....
- ...Final.....

APPROVED:

APPROVED:

Public Assistance Officer

Governors Authorized  
Representative

Camp George West  
Golden, Colorado 80401  
(303) 279-2511

- Richard D. Lamm  
GOVERNOR
- William L. Kumbler  
EXECUTIVE DIRECTOR
- Colorado State  
Patrol
- Colorado Bureau  
of Investigation
- Colorado Law  
Enforcement  
Training Academy
- Division of  
Criminal Justice
- Division of Disaster  
Emergency Services
- Division of  
Fee Safety





FEDERAL DECLARED DISASTER  
Final Claims Calculation Sheet

DATE: \_\_\_\_\_

Disaster Declaration Number \_\_\_\_\_

APPLICANT \_\_\_\_\_

P.A. NUMBER \_\_\_\_\_

1. Federal Share Calculation

A. Total Eligible Project Costs \$ \_\_\_\_\_  
B. Federal Share \$ \_\_\_\_\_  
    \$ \_\_\_\_\_ X 75%  
    (Line A)  
C. Federal Share Advances To Date \$ \_\_\_\_\_  
D. Amount of Final Federal Share Payment Due \$ \_\_\_\_\_  
    (Line 1B - Line 1C)

2. State Share Calculation

A. Total Eligible Project Costs \$ \_\_\_\_\_  
B. State Share \$ \_\_\_\_\_  
    \$ \_\_\_\_\_ X 10%  
    (Line A)  
C. State Share Advances To Date \$ \_\_\_\_\_  
D. Amount of Final State Share Payment Due \$ \_\_\_\_\_  
    ( Line 2B - Line 2C)

3. Total Final Claim Due

\$ \_\_\_\_\_ + \$ \_\_\_\_\_ = \$ \_\_\_\_\_  
    (Line 1D)                      (Line 2D)

COMMENTS:

Approved:

\_\_\_\_\_  
Governor's Authorized Representative

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**APPENDIX G**

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DIVISION OF DISASTER  
EMERGENCY SERVICES  
Camp George West  
Golden, Colorado 80401  
(303) 273-1624

## MEMORANDUM

John P. Byrne  
DIRECTOR

DATE: July 8, 1987

TO: All Federal Disaster Public Assistance Applicants  
Western Slope Flood 1984 FEMA-719-DR

FROM: *Leonard A. Boulias*  
Leonard A. Boulias - Governor's Authorized Representative

SUBJECT: Final Claims - Program Audit Requirements

With the disaster recovery program for the above disaster coming to closure, I thought it best to go over with you the audit requirements related to this disaster. First, let me say to those of you who have not received your final claims payment, as of this date, we continue to raise this issue with FEMA Region VIII. The outlook for resolution of the human resource problem at FEMA is not bright and, therefore, I can't be optimistic about when these claims may be finalized. All I can do is say they are being worked on and we continue to monitor the progress of each of them.

Now for the program audit requirements. There is no doubt the question of audits related to this program has been somewhat confusing. In the first instance, at the time of the Presidential Declaration July 1984, FEMA's requirements were for a project audit to be done by the State on each project application. The State fought this requirement on the basis of OMB Circular A-102, Attachment P, and later under provision of the Federal Single Act of 1984. We finally won out and on that basis on 11 February 1986, we put out the memorandum on audit requirements found at Attachment A. Since the time of that memorandum, the Colorado Department of Public Safety as the State recipient agency for federal disaster assistance funds has under the provisions of the Single Audit Act requested an annual audit report in each year, beginning in 1985, in which an applicant received federal funds.

Given this fact, the only year then in question as pertains to the use of federal funds is 1984 the first year in which federal funds were provided. From a programmatic standpoint the State has to certify to FEMA that the audit requirements called for in the Federal-State Agreement have been complied with. In order to do this without causing a whole lot of confusion the simplest way would be for each

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applicant who received federal disaster assistance program funds in 1984 to provide me a copy of their 1984 audit report. With these reports and the ones on hand in the Department of Public Safety for subsequent years in which said federal funds were received, the State will be in a position to certify that the FEMA program audit requirements have been met. The other alternative would be to have each applicant comply with the initial instructions put out in February of 1986, as noted in the attached material. This requirement is much more stringent. Based on these facts, it is requested that if you received federal disaster public assistance funds in calendar year 1984, you send a copy of your 1984 audit report to the following address:

Division of Disaster Emergency Service's  
Camp George West  
Golden, Colorado 80401  
Attn: Len Boulas, GAR FEMA-719-DR

Beyond this requirement it is noted that you should retain all records pertaining to this disaster for a period of 3 years from the date of receipt of final payment. Should you have any questions concerning your final claim or the audit requirements pertaining to your project application for federal disaster public assistance, please let me know.

Attachment: DODES Memorandum "Project Application  
Close Out Procedures - Final Claim"  
Dated 11 February 1986

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**Circular A-102**

**Attachment P—Audit Requirements**

1. This Attachment establishes audit requirements for State and local governments, and Indian tribal governments that receive Federal assistance. It provides for independent audits of financial operations, including compliance with certain provisions of Federal law and regulation. The requirements are established to insure that audits are made on an organization-wide basis, rather than on a grant-by-grant basis. Such audits are to determine whether (a) financial operations are conducted properly, (b) the financial statements are presented fairly, (c) the organization has complied with laws and regulations affecting the expenditure of Federal funds, (d) internal procedures have been established to meet the objectives of Federally assisted programs, and (e) financial reports to the Federal Government contain accurate and reliable information. Except where specifically required by law, no additional requirements for audit will be imposed unless approved by the Office of Management and Budget.

2. Definitions: "Cognizant agency" means the Federal agency that is assigned audit responsibility for a particular recipient organization by the Office of Management and Budget. "Recipient organization" means a State department, a local government, an Indian tribal government, or a subdivision of such entities, that receives Federal assistance. It does not include State and local institutions of higher education or hospitals, which are covered by Circular A-110.

3. State and local governments and Indian tribal governments shall use their own procedures to arrange for independent audits, and to prescribe the scope of audits, provided that the audits comply with the requirements set forth below. Where contracts are awarded for audit services, the contracts shall include a reference to this Attachment.

4. The provisions of this Attachment do not limit the authority of Federal agencies to make audits of recipient organizations. However, if independent audits arranged for by recipients meet the requirements prescribed below, all

Federal agencies shall rely on them, and any additional audit work shall build upon the work already done.

5. Audits shall be made in accordance with the General Accounting Office Standards for Audit of Governmental Organizations, Programs, Activities & Functions, the Guidelines for Financial and Compliance Audits of Federally Assisted Programs, any compliance supplements approved by OMB, and generally accepted auditing standards established by the American Institute of Certified Public Accountants.

6. Audits will include, at a minimum, an examination of the systems of internal control systems established to ensure compliance with laws and regulations affecting the expenditure of Federal funds, financial transactions and accounts, and financial statements and reports of recipient organizations.

These examinations are to determine whether:

a. There is effective control over and proper accounting for revenues, expenditures, assets, and liabilities.

b. The financial statements are presented fairly in accordance with generally accepted accounting principles.

c. The Federal financial reports (including Financial Status Reports, Cash Reports, and claims for advances and reimbursements) contain accurate and reliable financial data; and are presented in accordance with the terms of applicable agreements, and in accordance with Attachment H of this Circular.

d. Federal funds are being expended in accordance with the terms of applicable agreements and those provisions of Federal law or regulations that could have a material effect on the financial statements or on the awards tested.

7. In order to accomplish the purposes set forth above, a representative number of charges to Federal awards shall be tested. The test shall be representative of (1) the universe of Federal awards received, and (2) all cost categories that materially affect the award. The test is to determine whether the charges:

a. Are necessary and reasonable for the proper administration of the program.

b. Conform to any limitations or exclusions in the award.

c. Were given consistent accounting treatment and applied uniformly to both Federally assisted and other activities of the recipient.

d. Were net of applicable credits.

e. Did not include costs properly chargeable to other Federally assisted programs.

f. Were properly recorded (i.e., correct amount, date) and supported by source documentation.

g. Were approved in advance, if subject to prior approval in accordance with Circular 74-1.

h. Were incurred in accordance with competitive purchasing procedures, if covered by Attachment O of this Circular.

i. Were allocated equitably to benefiting activities, including non-Federal activities.

k. Audits usually will be made annually, but not less frequently than every two years.

8. If the auditor becomes aware of irregularities in the recipient organization, the auditor shall promptly notify the cognizant agency and recipient management officials above the level of involvement. Irregularities include such matters as conflicts of interest, falsification of records or reports, and misappropriation of funds or other assets.

9. The audit report shall include:

a. Financial statements, including footnotes, of the recipient organization.

b. The auditors' comments on the financial statements which should:

(1) Identify the statements examined, and the period covered.

(2) Identify the various programs under which the organization received Federal funds, and the amount of the awards received.

(3) State that the audit was done in accordance with the standards in paragraph 5.

(4) Express an opinion as to whether the financial statements are fairly presented in accordance with generally accepted accounting principles. If an unqualified opinion cannot be expressed, state the nature of the qualification.

c. The auditors' comments on compliance and internal control which should:

(1) Include comments on weaknesses in and noncompliance with the systems of internal control, separately identifying material weaknesses.

(2) Identify the nature and impact of any noted instances of noncompliance with the terms of agreements and those provisions of Federal law or regulations that could have a material effect on the financial statements and reports.

(3) Contain an expression of positive assurance with respect to compliance with requirements for tested items, and negative assurance for untested items.

d. Comments on the accuracy and completeness of financial reports and claims for advances or reimbursement to Federal agencies.

Comments on corrective action or planned by the recipient. Work papers and reports shall be retained for a minimum of three years from the date of the audit report unless the auditor is notified in writing by the cognizant agency of the need to extend retention period. The audit papers shall be made available upon request to the cognizant agency or assignee and the General Accounting Office or its designees.

The Office of Management and Budget will work with Federal agencies, State and local governments to ensure that recipient audits are made in accordance with the standards set forth in paragraph 5.

The Office of Management and Budget will designate cognizant agencies for major recipient organizations.

The cognizant agency shall have the following responsibilities: Obtain or make quality assessments of the work of non-Federal organizations, and provide the results to other interested audit agencies. (If a non-Federal audit organization is responsible for audits of agencies that have different cognizant agencies, a single quality assessment review should be arranged.) Assure that all audit reports of agencies that affect federally assisted programs are received, reviewed, and distributed to appropriate Federal audit officials. These officials will be responsible for distributing audit reports to their program officials.

Whenever significant inadequacies in an audit are disclosed, the recipient organization will be advised and the auditor or will be called upon to take corrective action. If corrective action is taken, the cognizant agency shall advise the recipient organization and the awarding agencies of the facts and its recommendation. Major inadequacies or repetitive substandard performance of independent auditors shall be referred to appropriate professional bodies.

Assure that satisfactory audit information is provided in a timely manner in accordance with the provisions of Attachment.

Provide technical advice and act as a liaison between Federal agencies, independent auditors, and recipient organizations.

Maintain a followup system on audit findings and investigative matters to ensure that audit findings are resolved. Inform other affected audit agencies of irregularities uncovered. The audit agencies, in turn, shall inform all appropriate officials in their agencies, State or local government law

enforcement and prosecuting authorities, shall also be informed of irregularities within their jurisdiction.

15. Recipients shall require subrecipients that are State and local governments or Indian tribal governments to adopt the requirements in paragraph 1 through 11, above. The recipient shall ensure that the subrecipient audit reports are received as required, and shall submit the reports to the cognizant agency. The cognizant agency will have the responsibility for these reports described in paragraph 14.

(44FR60959.10/22/79)



# MEMORANDUM




DIVISION OF DISASTER  
EMERGENCY SERVICES  
Camp George West  
Golden, Colorado 80401  
(303) 273-1624

John P. Byrne  
DIRECTOR

DATE: February 11, 1986

TO: All Disaster Public Assistance Program Applicants FEMA-719-DR  
(1984 Western Colorado Flood)

FROM:   
Leonard A. Boulas, Governor's Authorized Representative

SUBJECT: Project Application Close-Out Procedures-Final Claim

Many of the project applications for disaster public assistance under FEMA-719-DR are now or will in the near future be ready for close out and final claim. This process has been held up pending a resolution of the audit requirements between the State Auditor, the Federal Emergency Management Agency (FEMA) and the Office of Management and Budget. This situation has been resolved in coordination with FEMA Region VIII.

The following procedures are applicable to all project applications over \$25,000 except in selected cases.

## I. Close-Out Procedures & Final Claims

- A. The applicant should submit Summaries of Documentation and other supporting materials to this office as the work for each damage site is completed.
- B. The applicant is to assist with final inspections for specific damage sites as designated and coordinated by this office.
- C. Once all disaster related work under the Project Application is completed, the applicant is to submit a blanket certificate indicating same, requesting a final claim be processed by this office on his behalf.
- D. The applicant is to assist in the final program review and claims process as necessary. The final program review may consist of one or a combination of the following based on the dollar amounts involved, the program issues and their complexity.
  1. A desk review based on Summaries of Documentation, Damage Survey Reports, Final Inspection Reports, State copy of the applicant's file and other source documents supported by telcons with the applicant as necessary.

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2. A detailed program review based on the above documentation as well as an on-site visit by State and Federal Program Personnel to review supporting documentation and records.
  3. An on-site financial review by an independent evaluator provided by the State.
- K. Final claim recommendations will be prepared by this office for FEMA approval and, once approved, final payments will be made by the State for both the Federal and State shares of the project application. Should scheduling of an on site review result in an applicant cash flow problem pending final claim, this office will consider in coordination with FEMA, advancing up to 90% of the Federal and State shares.

II. Audits

- F. All project applications are to be subject to an OMB Circular A-102 Attachment P audit (see Handbook for Applicants, page M18 - M19; - copy provided as an enclosure). This audit requirement is to be performed as a portion of the first normally scheduled organizational/jurisdictional audit following completion of all disaster related work undertaken under the Disaster Public Assistance Program and payment of all claims for this work. Instructions to be given to the audit firm/agency are that an OMB Circular A-102 Attachment P audit is to be conducted specifically covering the Disaster Public Assistance Program. This audit should cover all transactions made during the program, not only those in fiscal year being audited. If the auditor becomes aware of irregularities in the recipient organization, this office, as well as the cognizant agency and recipient management officials, is to be notified. Two copies of the applicant's audit report are to be provided to this office upon completion of the audit. Note: The cost of this audit requirement is not an eligible program cost and is to be absorbed by the applicant.
- G. Applicant will maintain all records related to the project application for three years from the date of the audit performed under OMB Circular A-102 Attachment P, or final FEMA settlement of the claim whichever is later.
- H. All project applications will remain open, even though a final claim has been paid, pending receipt of the audit report performed under OMB Circular A-102 Attachment P or a federal audit. In those cases where irregularities are found, refund of previously paid Federal and State funds, may be required.
- I. The Federal Emergency Management Agency retains at all times the right to conduct a Federal audit of a project application and to withhold final payment of the Federal share until the completion of said audit or until the results of the OMB Circular A-102 Attachment P audit are received. In such

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cases the State would also withhold its final payment of the State share. This type of action is however a rarity. Final State and FEMA payments are not normally withheld pending receipt and review of various audit reports.

Based on the above procedures, I am hopeful the majority of the project applications can be closed out in the near future, without too much confusion. If you should have any questions please let me or the Disaster Recovery Staff (Bob Rold - Bob Kistner) know. We will be happy to answer your questions.

Attachments: OMB Circular A-102 Attachment P

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