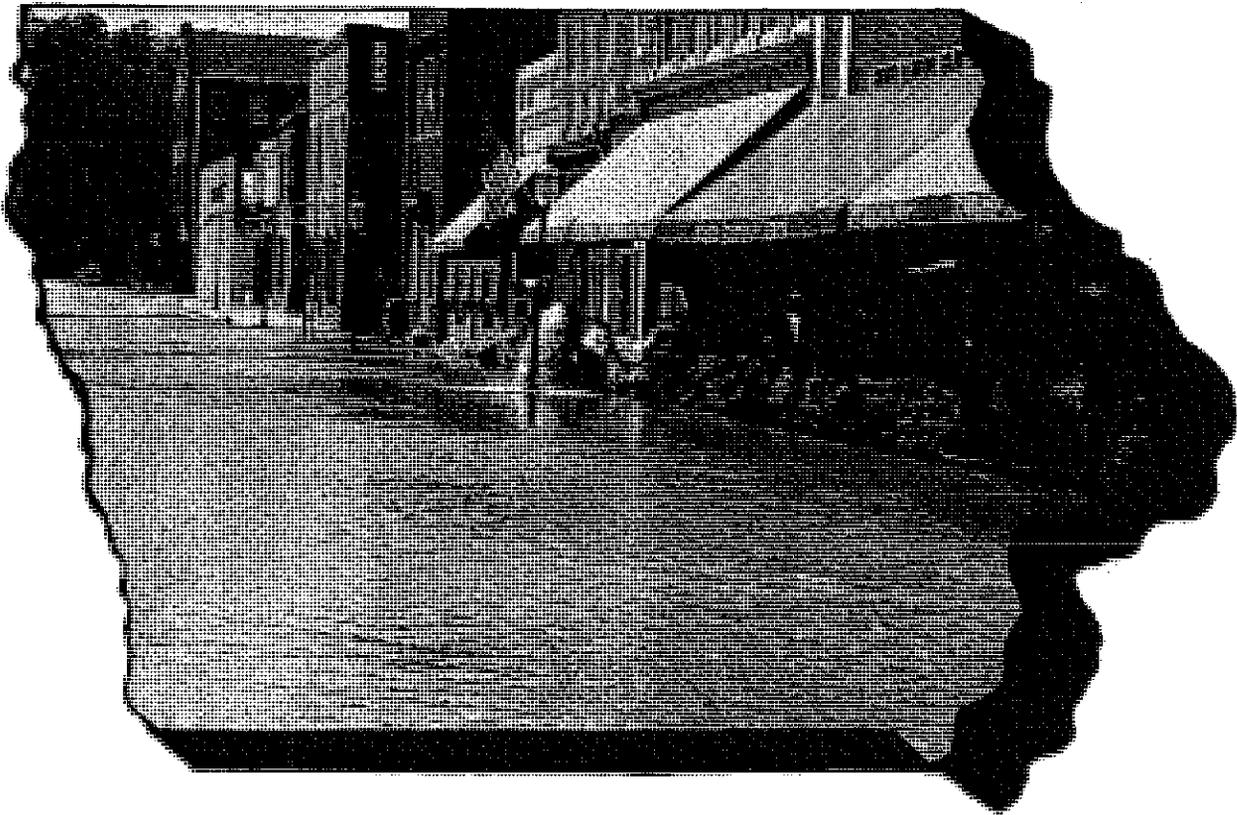


THE FLOODS OF 1993

IOWA FLOOD DISASTER REPORT



MAY 1994

EXPERIENCE IOWA

THE FLOODS OF 1993

IOWA FLOOD DISASTER REPORT

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FRONT COVER PHOTO: BONAPARTE, IOWA (DES MOINES RIVER)
BACK COVER PHOTO: CHELSEA, IOWA (IOWA RIVER)

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IOWA COLLECTION



TERRY E. BRANSTAD
GOVERNOR

OFFICE OF THE GOVERNOR

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DES MOINES, IOWA 50319
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To All Citizens of Iowa and Those Who Helped Us

May, 1994

Our Iowa spirit was given the ultimate test during the Floods of 1993. Never in our history has such widespread destruction affected our lives. Our worst natural disaster caused flooding from the Mississippi to the Missouri Rivers. Along with seemingly endless rain with little sunshine, the floods' impact touched every county, ruining homes and businesses, destroying crops, and testing our strength and determination to overcome adversity.

Adversity is the true test of character. Iowans met the challenge of 500-year flooding in 1993 with courage, hard work, and a determination to overcome ruination and disaster by helping each other move ahead. Neighbors helped neighbors. There were no strangers. Everyone pitched in and pulled together. People who suffered losses helped those still fighting and sandbagging. The outpouring of volunteers and contributions was phenomenal. It was paramount in bolstering our efforts to save lives, protect property, clean up, and restore our life to normal.

Iowans are extremely grateful for the support that poured in from throughout the nation. I am proud of the way Iowans have shown their willingness to assist each other and win this battle. We continue to be determined to help deliver quick assistance to those in need and assist in long-term recovery efforts. There has been much cooperation among various government agencies at all levels. This spirit of cooperation has allowed our response and recovery efforts to become united and effective in restoring our quality of life. This report summarizes our statewide efforts in dealing with the disaster. Hopefully, it will assist others in dealing with similar disasters as well as enhance our own preparedness for future calamities.

Iowans are united in an indomitable spirit to succeed, despite adversity. Truly, the unselfish giving, willing cooperation, and determination to make a difference characterized the flood relief effort as "Iowa's finest hour."

A handwritten signature in black ink that reads "Terry E. Branstad".

Terry E. Branstad
Governor

PART I. OVERVIEW

"In Iowa, we must never lose a healthy respect for the force and the rhythms of nature. We can work with nature but we can never fully control it. Our closeness to the land gives us a sensitivity to the environment"

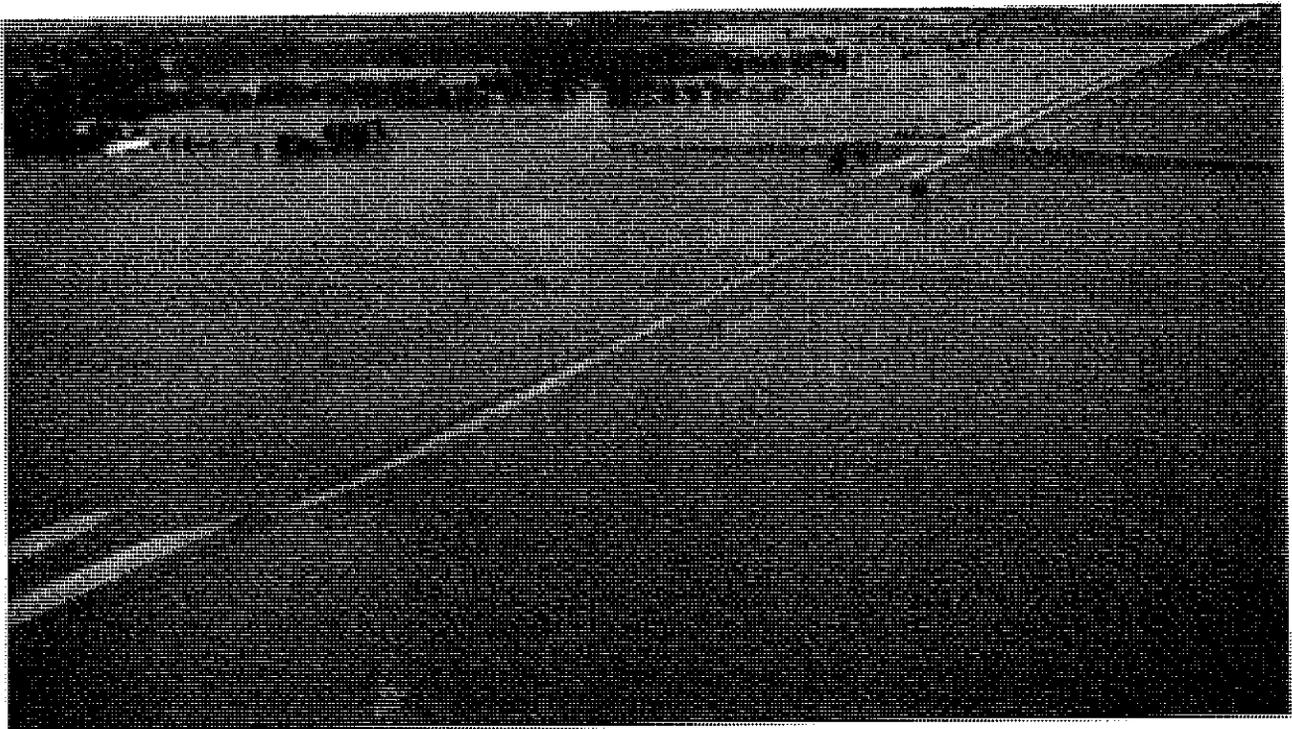
Governor Terry Branstad January 11, 1994

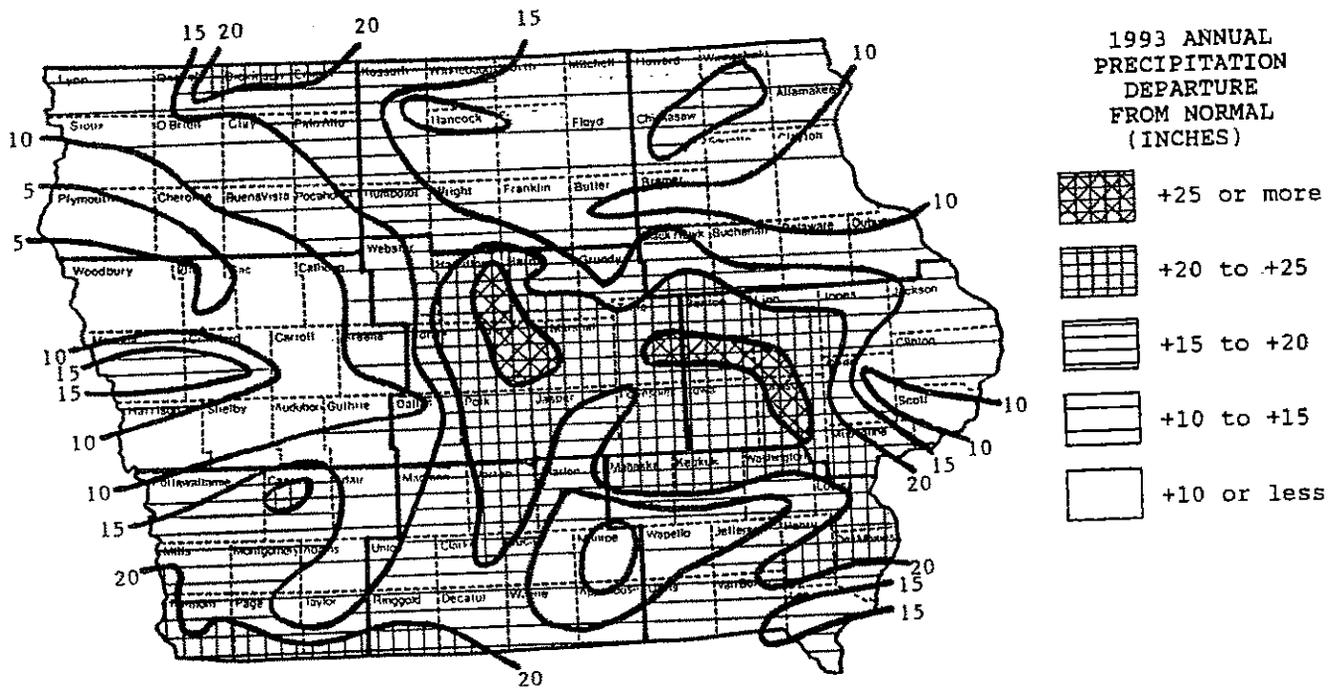
Excessive moisture and flooding, brought on by persistent heavy rains throughout the Midwest during the spring and summer of 1993, caused a myriad of negative incidents to the region. Serious economic and infrastructure losses occurred across Iowa and other Midwestern states. The magnitude of the disaster to people, properties, businesses, farms, the environment, and personal livelihoods was staggering, and unmatched by any previous flood in history.

Damages ranged from \$3-7 billion in Iowa and up to \$30 billion throughout the Midwest region according to federal estimates. Iowa lost over \$2 billion in crops and untold millions in business, tourism, public property, homes, personal prop-

erty, and other losses. Over \$1 billion was provided to citizens through disaster assistance and millions more through private insurance. Damaged roads, bridges, and rail lines disrupted transportation. The Mississippi and Missouri Rivers were closed to shipping. There was massive damage to levees and dikes, electric and gas utility systems, communication systems, farms, housing, industry, rural and community water systems, and sanitation systems. Millions of acres of farmland were under water for weeks during the peak growing season affecting agriculture and livestock production. Severe erosion, siltation, well pollution, chemical pollution, and other environmental damage were evident across the state.

Iowa suffered greatly by the floods. All 99 counties were declared federal disaster areas. Nearly 23,000 homes were damaged and over 10,000 residents were evacuated for their safety. Seven people died. Over one-third of the cropland was affected and for some crops, production dropped 62% from the previous year. Revenues lost from tourism was nearly \$1 million. Damages to public property and businesses were staggering. Some residents lost





everything. The floods did not discriminate between small towns and large cities. Chelsea's 376 residents were flooded five times. Over 250,000 residents in the capital, Des Moines, were without safe drinking water for 19 days after flooding overran the water treatment plant. President Clinton said during a visit, "I have never seen anything on this scale before... It was awful." Iowa will never know the actual cost of the damage. One can not put a price on human suffering.

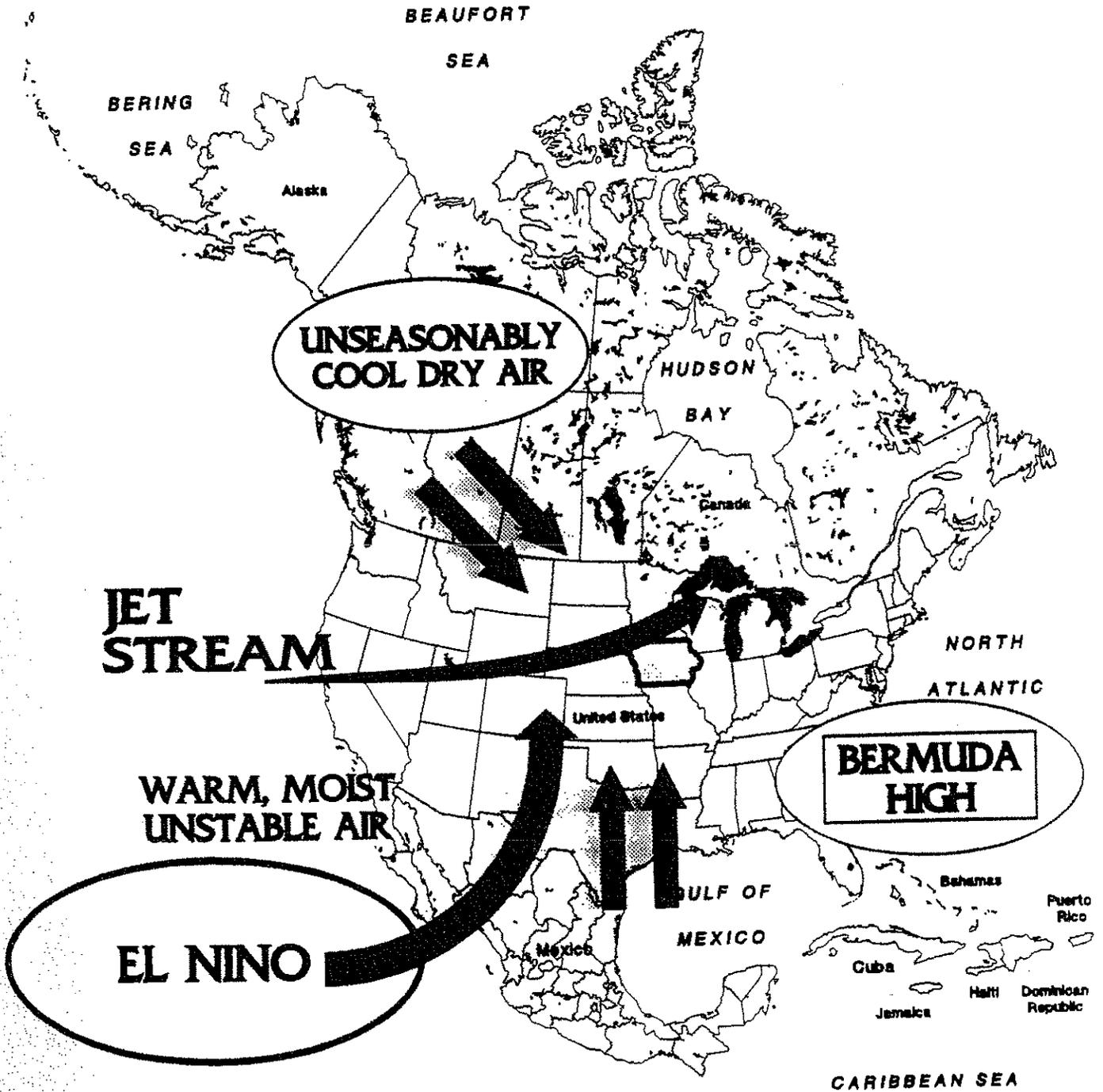
The greatest flooding in Iowa history during 1993 followed the greatest annual rainfall in Iowa history. Virtually every maximum precipitation record was broken. Average rainfall across the state totalled 48.13 inches, compared to a yearly average of 33.11 inches. In July alone, over 10.50 inches fell across the state and some areas received far more in less time.

It all started several months prior to 1993. The summer of 1992 was cool, leaving the ground moist. A very wet fall was followed by a cold, cloudy, and snowy winter. The flooding began with heavy rains and snowmelt in the spring of 1993. It remained cloudy and cool throughout the spring. The cool temperatures and severe

thunderstorms during the summer months produced torrential rainfall. Rivers, reservoirs, lakes, levees, dikes, and fields quickly filled to over capacity setting record flood levels in July. Physical damages to private and public property simply could not be totally prevented.

The weather pattern that dominated the Midwest during early 1993 was a "split flow" pattern, typical of El Nino events, causing extremely wet conditions. The westerly air flow at the jet stream level was split by a high pressure ridge over the western United States. The subtropical jet stream forced itself well to the south of the ridge into southern California while the polar jet stream was pushed to the north of the ridge into northwestern Canada. These two rapidly moving streams of air then swung around the eastern side of the high pressure ridge and converged over the Midwest. This produced ideal conditions for significant rainfall. In June, a large dome of stationary high pressure (Bermuda High) was lodged over the southeastern United States, resulting in hot, dry weather. The High circulated moisture from the Gulf of Mexico into the Midwest. Concurrently, a strong low pressure system was present in the upper atmosphere in the northern Rockies. This

SUMMER 1993



resulted in cool weather in the Mountain West during the summer. Unfortunately, the Midwest was located at the boundary of these two competing weather systems.

The high pressure system brought warm and humid air into the Midwest while the low pressure system continued to spin off disturbances across the plains, generating widespread thunderstorms. The exact demarcation line between the two systems continually changed, explaining why the heavy rains also changed locations. Indeed, Iowa had no chance to escape. Except for 13 days, it rained somewhere in Iowa every day for 130 days between mid-April and September!

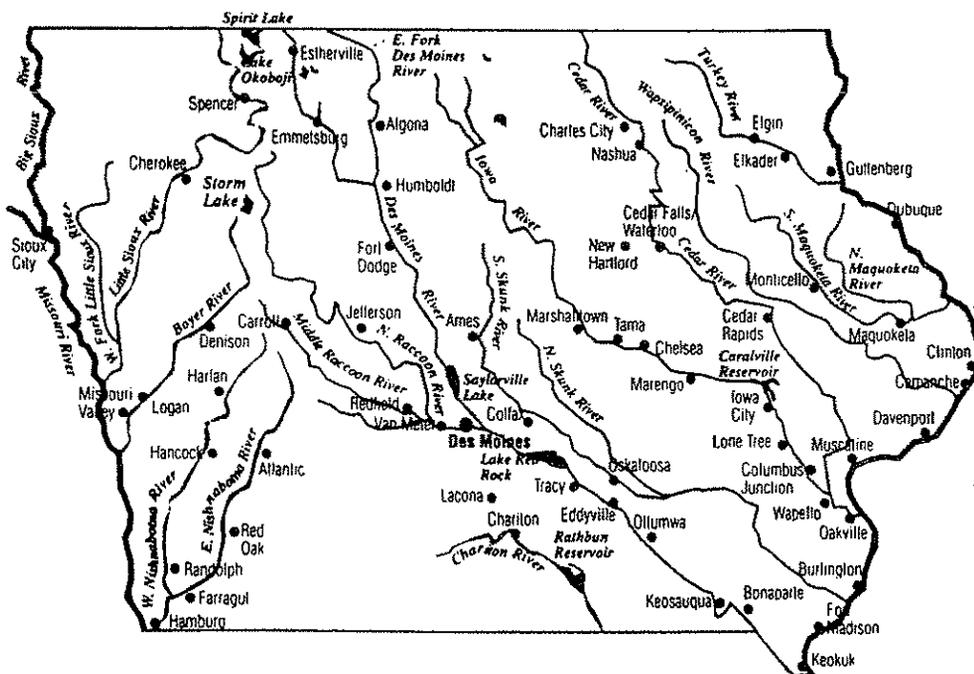
Finally, the weather pattern did not break up until after the Atlantic coast hurricanes in August. Iowa then returned to a drier and cooler than

usual autumn followed by a drier winter and early spring in 1994.

Iowa's emergency management systems responded to the flood disaster quickly and efficiently. Never in history has the destruction been so devastating and widespread throughout the state. Resources were stretched thin in efforts to aid flood victims. The overwhelming assistance from volunteers who responded to the call for help was the key ingredient to the success in battling mother nature.

As the state and each community throughout moved through the response and recovery phases, it is important to acknowledge the lessons learned from the 1993 floods and how preparedness for future disasters can be enhanced. Long-term recovery was dependent greatly upon broad, coordinated federally funded

IOWA RIVER FLOODING



MISSISSIPPI RIVER

- ◆ **Camanche**
Flood stage: 16
Peak July 8: 22.96
- ◆ **Davenport**
Flood stage: 15
Peak July 9: 22.65
- ◆ **Muscaline**
Flood stage: 16
Peak July 9: 25.61
- ◆ **Burlington**
Flood stage: 15
Peak July 10: 24.96
- ◆ **Keokuk**
Flood stage: 16
Peak July 10: 27.15

IOWA RIVER

- ◆ **Iowa City**
Flood stage: 22
Peak Aug. 10: 28.52
- ◆ **Marshalltown**
Flood stage: 13
Peak July 10: 20.55
- ◆ **Marengo**
Flood stage: 14
Peak July 19: 20.27
- ◆ **Wapello**
Flood stage: 20
Peak July 7: 29.53
- ◆ **Near Lone Tree**
Flood stage: 15
Peak July 7: 22.94

DES MOINES RIVER

- ◆ **Estherville**
Flood stage: 7
Peak July 10: 15.21
- ◆ **Near Saylorville**
Flood stage: 23
Peak July 11: 24.12
- ◆ **Near Tracy**
Flood stage: 14
Peak July 12: 24.16
- ◆ **S.E. 14th Street (DM)**
Flood stage: 23
Peak July 11: 34.29
- ◆ **Near Ottumwa**
Flood stage: 10
Peak July 12: 22.13
- ◆ **Keosauqua**
Flood stage: 25
Peak July 13: 32.66

FIGURES EXPRESSED IN FEET

NISHNABOTNA RIVER

- ◆ **Above Hamburg**
Flood stage: 16
Peak July 23: 30.52

WEST NISHNABOTNA RIVER

- ◆ **At Hancock**
Flood stage: 19
Peak July 10: 23.53

SOUTH SKUNK RIVER

- ◆ **Below Squaw Creek near Ames**
Flood stage: 7
Peak July 9: 25.53

At Coitax

- ◆ **At Coitax**
Flood stage: 17
Peak July 10: 19.40

- ◆ **Near Oskaloosa**
Flood stage: 15
Peak July 15: 25.16

SQUAW CREEK

- ◆ **Ames**
Flood stage: 7
Peak July 9: 18.54

CHARITON RIVER

- ◆ **Chariton**
Flood stage: 15
Peak July 6: 22.37

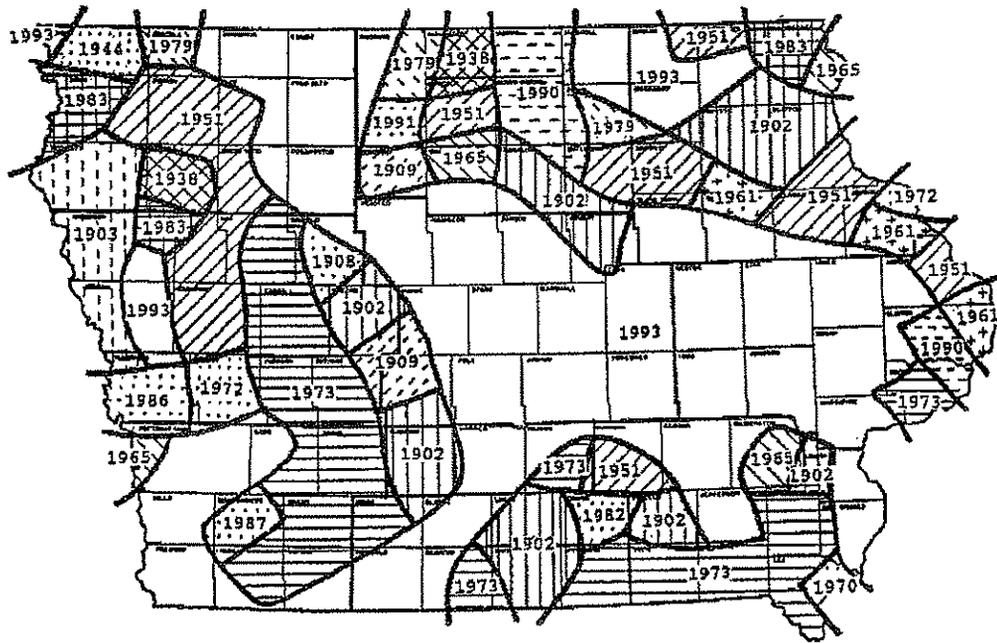
RACCOON RIVER

- ◆ **Van Meter**
Flood stage: 13
Peak July 10: 25.83

SOUTH RACCOON RIVER

- ◆ **Redfield**
Flood stage: 14
Peak July 10: 27.09

SOURCES: U.S. Army Corps of Engineers, National Weather Service



The state average precipitation for 1993 was the greatest on record. The map indicates the record wet year for each area of the state for the past 100 years. Nineteen different years are represented on the map, most of them since 1965.

assistance. This included both short-term relief and long-term support to individuals, farmers, businesses, and public entities. To be successful, the assistance had to be swift, effective, and filled with public information.

"If the floods have taught us only one lesson, it is this... No one can do it alone."

Governor Terry Branstad January 11, 1994

The year 1993 is over, but will not be forgotten by the people of Iowa. The recovery effort will continue throughout 1994. Iowa is well on its way back to normal. The state demonstrated that government and its citizens can effectively deal with even 500-year floods! The values and spirit Iowans cherish and possess remain intact, and the experience with the floods could very well lift Iowa to even greater heights.

"We must work together to identify and meet the needs of public health and safety and the imminent need to help people of the Midwest clean up and rebuild America's heartland. Our

ultimate aim must be to restore the vitality of the regional economy."

President Bill Clinton July 16, 1993





DES MOINES, IOWA

CHRONOLOGY OF SIGNIFICANT EVENTS

FLOODS OF 1993

- 1 April Governor proclaimed Black Hawk, Butler, Floyd, Humboldt, Kossuth, Mitchell, Tama and Wright Counties state disaster areas due to Northern Iowa flooding.
- 12 April Governor proclaimed seven additional counties as state disaster areas and requested a Federal Disaster Declaration for 15 counties from March 26, 1993 through April 12, 1993.
- 28 April A Disaster Field Office became operational in Cedar Rapids.
- 2 May President Clinton declared 15 counties Federal Disaster Areas. First Presidential Declaration.
- 20 June Des Moines River seven feet above flood stage above Saylorville Lake north of Des Moines.
- 25 June Locks closed on Mississippi River. Governor proclaimed 12 counties as state disaster areas.
- 27 June National Guard activated for sandbagging, traffic control, security, evacuation assistance, and levee patrol in Davenport for Mississippi River flooding. State Government Emergency Operations Center activated for continuous operations.
- 28 June Commercial traffic closed on Mississippi River with flooding in Dubuque and Davenport. Governor proclaimed three additional counties state disaster areas.
- 30 June Mississippi River six feet above flood stage, causing evacuation operations in Davenport. Flash flood warning for entire state, except Northern Iowa. Agriculture Secretary Espy toured Northeast Iowa.
- 1 July Governor proclaimed 27 additional counties as state disaster areas. Raccoon River rose rapidly, threatening Des Moines Water Works Plant.
- 2 July Mississippi River at or above all-time record high. Record level on Des Moines River at Saylorville Lake; outflow raised river three feet. Coralville Reservoir 38 feet higher than normal. Governor proclaimed another county as state disaster area.
- 4 July President Clinton surveyed damage in the Quad Cities. Coralville Reservoir (Iowa River) over emergency spillway for first time in history.
- 5 July Governor proclaimed another county as state disaster area.

- 6 July Several lower Des Moines River towns evacuated. Two miles of I-80 closed near Iowa City. Mississippi River closed from St. Louis to above Iowa's Northern border. Governor proclaimed another county as state disaster area.
- 7 July Levees fail along Iowa River causing 800 people to flee in Louisa County. Saylorville Lake at 96% capacity (4.8 feet over emergency spillway). Damage assessment teams sent out to Eastern Iowa. Tornado damaged 30-40 homes in Cottage Grove. FEMA (Region 10) to support Iowa operations.
- 8 July Heavy rainfall in Raccoon River Basin (7.83 inches in Jefferson). Rained 37 of last 40 days across Iowa. 300 homes evacuated on Lower Des Moines River at Ottumwa.
- 9 July Major flooding in Central Iowa. Iowa State University's Hilton Coliseum contained 14 feet of water. I-35 highway closed south of Ames. Record flooding predicted for Valley Junction area of West Des Moines. Corps of Engineers announced that Saylorville, Coralville, and Red Rock Reservoirs are at capacity. Governor proclaimed six additional counties as state disaster areas. Nishnabotna River flooded I-80 highway in Southwestern Iowa. FEMA National Teleregistration Center began accepting applications for assistance. Governor requested 2nd Federal Disaster Declaration from April 13th through October 1, 1993. Approved by the President.
- 10 July 5,000 people evacuated in West Des Moines. Final day of the Ruan Greater Des Moines Grand Prix cancelled due to street flooding. FEMA Region 10 Advance Emergency Response Team arrived at the Davenport Disaster Field Office site and State Emergency Operations Center. Governor visited flooding on Spirit Lake as emergency water control activities were initiated.
- 11 July State of emergency declared in Des Moines and West Des Moines. Des Moines Water Works Plant flooded, causing 250,000 residents to lose water. Electrical outage in downtown Des Moines due to flooding. FEMA Region 7 activated the Federal Response Plan and opened the Regional Operations Center. A Disaster Field Office became operational in Davenport. Governor proclaimed another county as state disaster area. Seventeen water distribution sites established in Des Moines.
- 12 July Governor proclaimed four additional counties state disaster areas.
- 13 July Saylorville Lake at record high (892 feet) and Lake Red Rock at record high (782.67 feet). Remaining 43 counties proclaimed disaster areas by Governor. Electrical power restored to most of Des Moines. Governor Branstad, Senator Harkin, and FEMA Director Witt visited flooded areas. Fifty water distribution sites operational in Des Moines.
- 14 July President Clinton visited Des Moines. Lake Red Rock outflow 104,000 cfs (previous record 40,000). Flood water removed from Des Moines Water Works Plant with pumps airlifted out for repair. Four water purification sites established in Des Moines. Three Disaster Assistance Centers opened in Davenport. All 99 counties declared a Federal Disaster Area for Individual Assistance.

- 15 July Saylorville Reservoir outflow 40,800 cfs (previous record 30,000). Des Moines Mayor ordered all non-essential businesses closed until tap water is restored. Ninety-seven water distribution sites operational in Des Moines.
- 17 July Ames hit by second flood.
- 18 July Cherokee flooded by Little Sioux River. Anamosa and Toledo received five inches of rain.
- 19 July Mississippi River bridge opened at Keokuk. Over 100 water distribution points open in Polk County.
- 20 July Iowa City sandbagged water treatment plant.
- 21 July Federal Public Assistance approved for ten counties (Crawford, Des Moines, Dickinson, Johnson, Polk, Pottawattamie, Scott, Shelby, Van Buren, Wapello).
- 22 July Des Moines residents allowed to turn on water taps for first time in 12 days, although water not safe for drinking.
- 23 July Fremont County received six inches of rain. Missouri and Nishnabotna Rivers flooded.
- 24 July Nishnabotna River overran levee at Hamburg. Coralville Reservoir at elevation 716.75 feet (previous record 711.84 feet).
- 26 July Hamburg reported 20 inches of rain in 17 days. Most Des Moines businesses reopened. Jet stream shifted, promising to end heavy rains.
- 27 July Coralville outflow 25,100 cfs (previous record 13,000). Mississippi River fell below flood stage in Dubuque. Two FEMA mobile DAC units deployed. Additional 26 counties approved for Federal Public Assistance (Allamakee, Audubon, Boone, Cedar, Clarke, Clinton, Decatur, Emmet, Guthrie, Henry, Iowa, Jasper, Jones, Lee, Linn, Lousia, Lyon, Madison, Monona, Page, Palo Alto, Ringgold, Story, Tama, Warren, Woodbury).
- 28 July Iowa Department of Transportation officials estimated 40 bridges and 60 highways damaged.
- 30 July Des Moines water declared safe to drink.
- 1 August Additional 16 counties approved for Federal Public Assistance (Adair, Buchanan, Buena Vista, Carroll, Cass, Clay, Dallas, Green, Hamilton, Marshall, Mills, Muscatine, Sioux, Taylor, Union, Worth).
- 10 August Additional eight counties approved for Federal Public Assistance (Fayette, Jackson, Dubuque, Clayton, Harrison, Montgomery, Benton, Cherokee).

- 16 August Cedar River flooded Charles City and created problems in Nashua, Plainfield, Waverly, and Janesville. South Skunk and Squaw Creek flooded Ames for third time.
- 17 August Tama flooded a fourth time and Chelsea for the fifth time. Elgin flooded by a levee break on the Turkey River.
- 20 August Additional 12 counties approved for Federal Public Assistance (Black Hawk, Davis, Franklin, Fremont, Jefferson, Keokuk, Kossuth, Lucas, Mahaska, Osceola, Webster, Winneshiek).
- 22 August Mississippi River opened for barge traffic first time since June 25th.
- 29 August Five inches of rain in 24 hours caused widespread flooding and sewer backups in Des Moines and suburbs.
- 7 September Davenport Disaster Field Office moved to Des Moines.
- 20 September Additional 21 counties approved for Federal Public Assistance (Adams, Appanoose, Bremer, Butler, Calhoun, Cerro Gordo, Chickasaw, Delaware, Floyd, Grundy, Hardin, Howard, Humboldt, Marion, Mitchell, O'Brien, Pocahontas, Sac, Washington, Winnebago, Wright).
- 1 October All major rivers below flood stage.
- 4 October Remaining six counties approved for Federal Public Assistance (Hancock, Ida, Monroe, Plymouth, Poweshiek, Wayne).
- 8 October FEMA Region 10 staff transitioned DFO Operations to Region 1 staff.



PART II. DISASTER RESPONSE OPERATIONS

A. ORGANIZATION AND EMERGENCY PREPAREDNESS

RECEIVING FEDERAL DISASTER ASSISTANCE

Each year states are struck by a wide range of natural disasters varying in form and scope. The effects of disasters range from local impacts from a storm striking a single community to a hurricane or large-scale flooding.

Communities are responsible for their own protection, and as a result, are the first line of defense when a disaster strikes. The intent of the Stafford Act [In 1988, Public Law 93-288 was amended by Public Law 100-707 and retitled as the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Public Law 93-288 as amended)] is that federal assistance be to state and local efforts supported by private relief organizations.

When flooding occurred in Iowa during 1993, communities responded to the best of their ability. When they realized the overwhelming magnitude of the disaster, they turned to the state for assistance. The Governor directed that the state's emergency plan be executed and directed the use of all state resources including the National Guard. When the response exceeded the capabilities of the state, the Governor requested that the President declare a major disaster within Iowa under the authority of the Stafford Act.

While this request was being processed, local and state government officials continued to take immediate actions to respond to and begin recovery from the disaster. Commensurate with the supplemental nature of Stafford Act assistance, the federal share of recovery expenses was normally limited to 75 percent of

eligible costs. State and local governments were required to absorb the remaining expenses.

After the declaration, the Governor's Authorized Representative (GAR) made requests for additional assistance. All requests were directed through the Federal Emergency Management Agency (FEMA) Region for Iowa.

When the declaration was made, FEMA designated the areas eligible for assistance and the types of assistance available. With the declaration, a Federal Coordinating Officer (FCO) was appointed responsible for coordinating all federal disaster assistance programs administered by FEMA and other federal agencies. FEMA's response and recovery activities were closely coordinated with those of other federal agencies as well as state agencies and the availability of state resources. These coordination activities were conducted primarily through the Disaster Field Office (DFO).

The Federal Response Plan (FRP) was the primary vehicle for interagency coordination during the emergency response period. As emphasis shifted from response to long-term recovery, coordination with other federal agencies was maintained through FEMA's Regional Office and the Disaster Field Office. The FRP described mechanisms and structures by which the federal government mobilized resources and conducted activities to augment state and local response elements. Twelve Emergency Support Functions (ESF's) served as the primary mechanism through which federal response assistance was provided:

- ESF#1 - Transportation (Department of Transportation)
- ESF#2 - Communications (National Communication System)
- ESF#3 - Public Works and Engineering (DOD, US Army Corps of Engineers)
- ESF#4 - Firefighting (US Forest Service, Department of Agriculture)
- ESF#5 - Information and Planning (Federal

Emergency Management Agency)
ESF#6 - Mass Care (American Red Cross)
ESF#7 - Resource Support (General Services Administration)
ESF#8 - Health and Medical Services (US Public Health Service, Department of Health and Human Services)
ESF#9 - Urban Search and Rescue (Department of Defense)
ESF#10 - Hazardous Materials (Environmental Protection Agency)
ESF#11 - Food (Food and Nutrition Service, Department of Agriculture)
ESF#12 - Energy (Department of Energy)

STATE AND LOCAL EMERGENCY MANAGEMENT

Iowa's flood relief effort was coordinated by the Emergency Management Division (EMD) of the Department of Public Defense. This office is responsible for the development and maintenance of state multi-hazard plans, emergency operations training, and coordination with state, local, and federal government agencies in all phases of emergency management. The Administrator of EMD served as the Governor's Authorized Representative (GAR) and as the State Coordinating Officer (SCO). EMD was also responsible for the management of the State Emergency Operations Center (EOC), located within the division in the Hoover Building. Emergency Management extends into each of Iowa's 99 counties through the County Emergency Management Coordinator, responsible for maintaining state approved county-wide disaster plans.

Flooding was not a new experience to most of the affected communities. The degree of preparedness was adequate, however, the magnitude and duration of the flooding found many communities and government agencies unable to cope without assistance. The majority of the requests were for sandbags, pumps, and personnel. It has been emphasized within Iowa that planning, training, and exercising for a major

disaster or catastrophic event is the most effective way to insure that crucial elements for response and recovery are successful.

There have been five Presidential declarations for flooding alone since the spring of 1990 and many events that were not declared, causing most communities to refine their emergency operations plans frequently. Building an effective emergency response and recovery capability obviously requires a great deal of planning and training. An emergency operations plan must be in place and be continually updated and tested to address all hazards. The experience, combined with the training and exercising by local communities and the state, led to a very effective response and recovery for the 1993 flooding.

Funding for emergency management programs is not adequate. Local and state governments operate on limited funds. They are unable to be proactive and keep pace with all requirements placed upon them. The state presently receives very limited (less than 30 cents per capita) emergency management assistance funds from FEMA for state and local programs. Iowa currently has 57 of 99 counties participating in the Federal Emergency Management Assistance Program. This program is the funding foundation for the emergency management system. State and local governments rely heavily upon funding provided through the Federal Emergency Management Agency to aid in maintaining and improving emergency response and recovery capabilities.

B. DISCUSSION OF SIGNIFICANT ACTIVITIES

Due to early spring flooding, Governor Branstad requested that 15 counties be declared federal disaster areas. A Presidential Disaster Declaration was declared for those counties for the period March 26th through April 12th. A Disaster Field Office was operational in Cedar Rapids from April 28th to June 4th. Again on July 9th, the Governor requested a federal

disaster declaration for flooding. A second Presidential Disaster Declaration was declared ultimately for the period April 13th through October 1st. All 99 counties were eligible for Public and Individual Assistance.

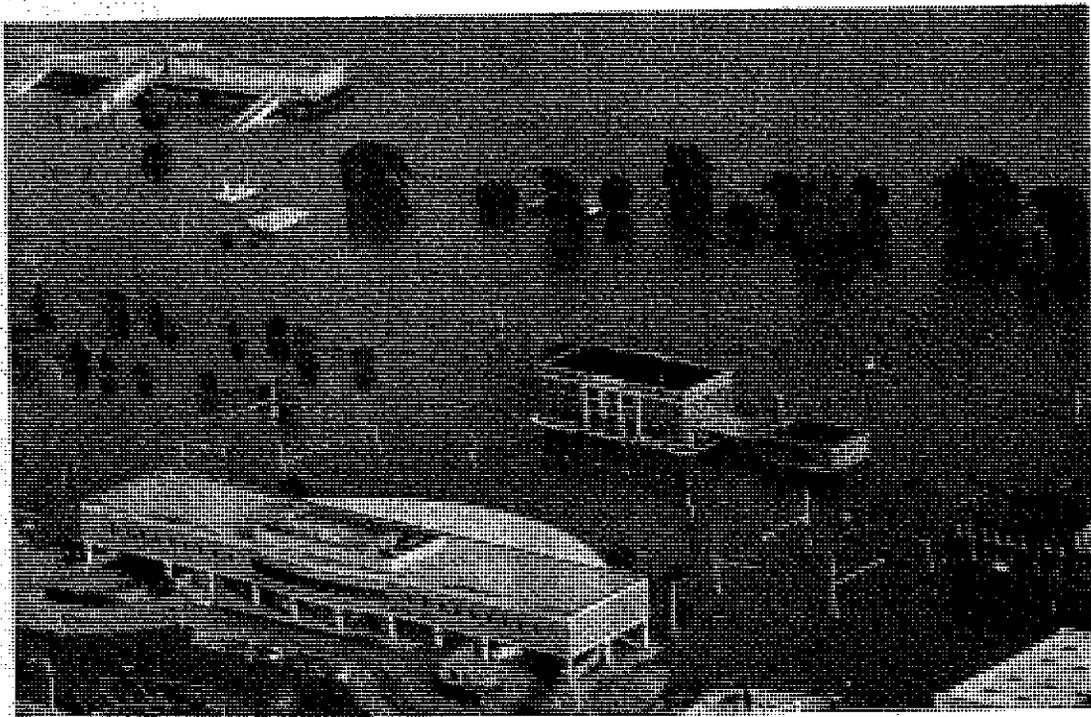
EMD supervised the activation of the State Emergency Operations Center (EOC) which evolved into fully staffed, 24-hour operations during the period June 27th through July 30th. During these emergency operations, the response capability toward nuclear power plants became a concern. To assure an adequate response capability by the state, an alternate response cell was created in the Hoover Building to monitor the nuclear power plant disaster planning phase.

The State EOC was staffed with representatives from numerous state and federal agencies:

Governor's Office
Emergency Management Division, Department of Public Defense
Iowa National Guard, Department of Public Defense
Department of Natural Resources

Attorney General's Office
Department of Human Services
Department of Public Safety
Department of Transportation
Department of Agriculture and Land Stewardship
Department of Public Health
Department of Elder Affairs
Department of Corrections
Department of Economic Development
Department of Education
Department of Inspections and Appeals
Federal Emergency Management Agency
American Red Cross
Salvation Army
US Army Corps of Engineers
National Weather Service
Amateur Radio
Civil Air Patrol

EMD provided technical guidance and coordinated the actions of the State EOC to insure the emergency plans were executed correctly and delivery of assistance was accomplished efficiently.

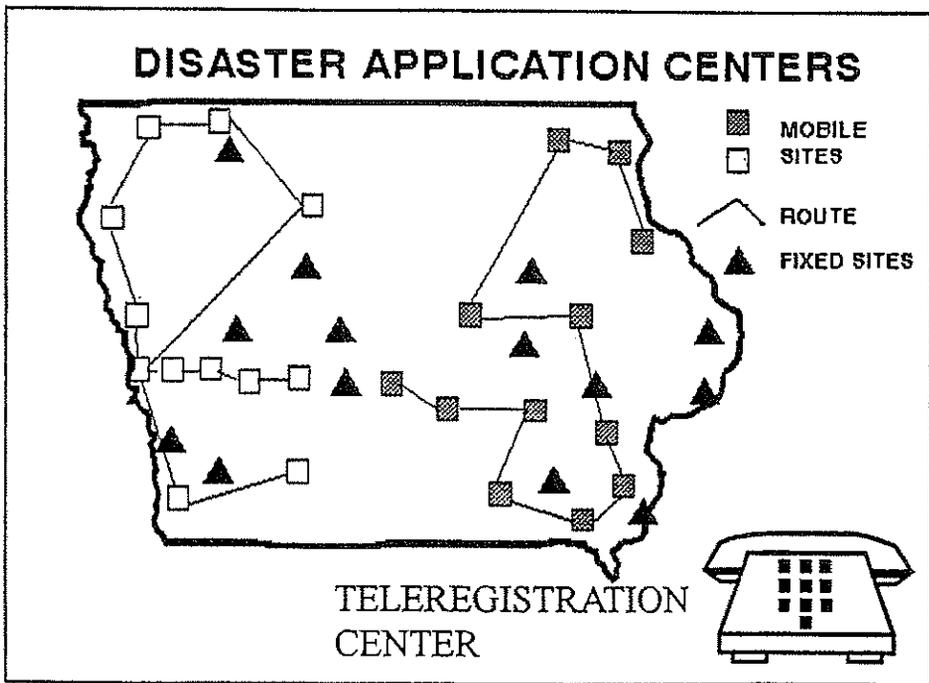


The Governor immediately ordered the Iowa National Guard to state active duty when communities in disaster-declared areas were in need. Over 4,500 Army and Air National Guard men and women were called to respond at various times during the spring and summer months. In July, there were over 2,000 on duty at one time. Nearly one half of them were in the Des Moines area assisting with water distribution and flood control in the capital city without tap water. Soldiers and airmen from units across the state performed heroically by conducting massive sandbagging operations, patrolling levees, evacuating and providing security, operating municipal pumping stations, cooking meals for the elderly, providing public showers, and assisting with state and local communication and administrative needs. They performed duty in over 48 communities, many simultaneously. Without the help provided by the National Guard, community damage would have been much greater, and the response effort would have been much slower.

Due to overwhelming and catastrophic flood damage beyond the state's ability to provide relief, the state again requested assistance from the federal government. After receiving another Presidential Disaster Declaration on July 9th,

and after 250,000 Des Moines residents lost drinking water the night of July 10th, FEMA Region 7 activated the Federal Response Plan (FRP) and opened the Regional Operations Center (ROC) on July 11th. FEMA National Teleregistration Center had begun accepting applications for assistance on July 9th. FEMA Region 10 Advance Emergency Response Team became operational in Davenport and at the State EOC in Des Moines on July 10th. The Davenport Disaster Field Office (DFO) was fully operational on July 11th with federal and state personnel. Auxiliary DFO's were opened in Davenport and Des Moines to accommodate Public Assistance requests. On July 12th the Davenport DFO took over ESF activities from the Region 7 ROC. The Davenport DFO moved to Des Moines on September 7th and continued operations from that location throughout the remainder of the disaster recovery period. Region 10 staff transitioned DFO operations to Region 1 staff on October 8th. All Emergency Support Functions within the Federal Response Plan were implemented, except 2 and 4, and are discussed later in this report.

FEMA's response was effective considering the scope of their mission under the FRP. FEMA personnel were dispatched to the State EOC quickly and continued to provide assistance throughout the recovery process. The FEMA and state outreach to disaster victims was enhanced through the use of mobile disaster application centers (DACs), in addition to the 14 fixed centers. Two teams of federal and state officials deployed in mobile units between July 27th and August 11th to cover outlying areas of the state where remote geographical location or flood induced inaccessibility made



fixed DACs impractical.

Available assistance included funds for housing, low interest loans, grants, disaster unemployment assistance, casualty loss tax treatment, and other disaster related aid. The ability to deliver disaster assistance more directly to affected communities provided additional reassurances to citizens that help was available. Although the total applications accepted at the mobile DACs totalled less than 500, the on-site assistance was very visible, allowed for greater walk-in requests, and satisfied local, state, and national requests for assistance centers in specified areas.

EMD organized special teams to coordinate specific areas such as volunteer and donation support, public information, and health and sanitation needs. The volunteer and donation team included representatives from major volunteer organizations who maintained control of donations and goods totalling over \$21.8 million donated to Iowans from people all over the United States and some overseas. After a brief period of receiving many unsolicited goods, the team established a policy that no goods could be accepted into the state unless a volunteer group, government agency, or a private entity was willing to accept responsibility for its receivership and distribution. Effort was made to centralize needs with resources and to decentralize the receipt and distribution of resources and maintain accountability. Actions have been taken to formalize procedures and permanently include in the emergency management system.

An enlarged public information team was mobilized using public information staff from other state agencies. The team included members from the Departments of Public Health, Employment Services, Economic Development, Human Services, and Natural Resources. A staffing plan was created that required two PIO specialists to be on duty during 24-hour EOC operations.

A media area was established outside the EOC. This area included phones, computers, fax and copy machines, televisions, and a briefing area. Staff members were sent to monitor briefings at other locations, such as city and county EOCs. Briefing books were assembled by staff, which included summaries of briefings held elsewhere. In addition, all media releases published by state government were placed in the book as were situation reports. This allowed all the public information staff to share information and provide common output.

The State EOC received technical assistance from other state emergency management staffs, including Florida, Indiana, Mississippi, and Utah, which greatly expanded the technical expertise necessary in emergencies.

The Governor not only issued disaster proclamations, he also exercised his powers to waive restrictive rules and timeliness that would otherwise have impeded disaster response and recovery efforts. Most importantly, he extended his disaster proclamation to enable local government to continue to avail themselves of state resources.

Response and recovery efforts were coordinated through the emergency management system in Iowa and supported with federal resources. State resources were used extensively before federal assistance was requested. Federal assistance and resources were provided primarily through twelve emergency support functional areas.

ESF #1 - TRANSPORTATION

State transportation and public safety officials monitored road, railroad, and bridge conditions by both air and ground surveillance and developed detour routes. News releases of road closures were passed through State EOC public information sources. Public Assistance damage assessment teams inspected damaged roads, highways, bridges, railroads, airports, river terminal facilities, waterways, trails, and

other public transit systems. Emergency repair work was performed as soon as conditions allowed. Damages existed in most counties and some major roads and other systems were inoperational. Damage to county secondary roads was severe due to washouts and gravel erosion. Total transportation system damage exceeded \$35 million.

ESF #2 - COMMUNICATIONS

Federal resources in this ESF were not requested, therefore this ESF was not activated in the federal response plan.

ESF #3 - PUBLIC WORKS AND ENGINEERING

State and local agencies were generally capable of restoring essential public services and facilities until the early morning hours of July 11th. Record flooding on the nearby Raccoon River caused flood waters to rise above the levee system surrounding the Des Moines Water Works Plant. Several feet of river water covered plant facilities and pumps causing over 250,000 citizens to lose all tap and drinking water. More importantly, the capital city was left with no effective fire protection capability and nearly 40,000 residents were without electrical power in homes, offices, and businesses. The Governor, state and local officials, and relief support per-

sonnel quickly devised a plan to obtain and distribute water and other essential services. The first water distribution site was operational eight hours after the loss of water. Priority was given to fire stations and hospitals. Bulk tanker trucks and bottled water began to arrive from all across the nation. Iowa National Guard resources were quickly detailed to manage a water distribution and water site security system. Federal resources under ESF #3 were requested to assist in bulk water tanker support and portable toilet service. The US Army Corps of Engineers later provided contracting teams to Des Moines to contract for requested support. This assistance was not coordinated initially with the state and resulted in a duplication of effort in arranging for bulk water tanker support. Mobile contracting teams should have been forwarded immediately to the state upon activation of ESF #3. Thirty-two Army National Guard water purification units from several states were brought in to purify water for hospitals, allowing them to use their internal water delivery system in sufficient quantities for medical needs. Military bladders capable of storing 3,000 gallons of water were installed. Within four days, nearly 100 water distribution sites were operational, dispensing nearly 3 million gallons of water daily to the citizens of Des Moines and neighboring communities. The state employees union managed a delivery system of water for nursing home residents and the elderly. Assistance to



restore the Des Moines Water Plant began immediately. Army National Guard helicopters assisted water plant officials and contractors in raising the height of the levee system surrounding the plant with sandbags filled by thousands of volunteer citizens. Helicopter assistance was also utilized in transporting large, heavy water pumps and associated equipment for restoration and return to the water plant. By July 30th, the water system had been reactivated and the water tested as safe for human consumption. Other ESF #3 activities provided by the COE included water hauling for other Iowa communities and securing pumps for removing ponded water from various local communities. Demobilization of water distribution sites, water purification units, and over 1200 portable toilet services was begun as federal resources consumed in this ESF were deactivated on July 30th.

ESF #4 - FIRE FIGHTING

Federal resources in this ESF were not requested, therefore this ESF was not activated in the federal response plan.

ESF #5 - INFORMATION AND PLANNING

This ESF focused on the collection, analysis, and dissemination of critical information to facilitate the overall response and recovery operation. Data was provided to the DFO in Davenport and to the State EOC in Des Moines. Aerial reconnaissance for damage assessment was evaluated for each county. Collected Individual Assistance damage data was analyzed to facilitate target areas of anticipated heavy Public Assistance damages. Many media, interagency, and political requests required the FEMA staff to focus on analyzing extensive amounts of damage data. Most requests were urgently needed by Congress to formulate supplemental appropriations, or for some agencies to determine funding levels. The lack of qualified, trained staff restricted the capability of this vital function. The planning and analysis requirements are critical to the entire response and recovery effort.

ESF #6 - MASS CARE

As the primary agency for federal support, the American Red Cross (ARC) took the lead in providing food and shelter for thousands of flood victims. Service centers opened, taking applications for assistance. Mobile feeding stations were instrumental in providing meals to local citizens forced out of their homes. A toll-free ARC Disaster Relief Hotline was established to request assistance. The Salvation Army, various church organizations, and other volunteer agencies joined in to provide outreach and assistance to flood victims across the state. Donations, pledges, and contributions were quick to come into the state. Resources for mass care needs were met by volunteer agencies without much federal support. ARC declared the Iowa floods a Level 5 disaster relief operation, the highest level possible. Contributions from the corporate sector were remarkable. Items such as cost free hotel rooms, food and water, money, and free services and supplies were abundantly available to needy citizens. The volunteer spirit was clearly evident, not only from Iowans, but from thousands of non-residents as well. All volunteered their time to fill sandbags, save lives, salvage individual belongings, and generally assist wherever a need existed to people whom they had never before met. Volunteerism continued for months after the end of the flooding, as volunteers assisted in rebuilding homes, public facilities, and in general putting people's lives back together.

ESF #7 - RESOURCE SUPPORT

General Services Administration was activated to assist in acquiring supplies and equipment needed by various federal disaster assistance agencies. Goods and services were procured through contracts for support aimed primarily at DFO operations. Similar activities were performed by the Iowa Department of General Services for supplies, equipment, and services necessary for state government operations.

ESF #8 - HEALTH AND MEDICAL SERVICES

The Iowa Department of Public Health coordinated with FEMA on anticipated issues such as water and food safety, sanitation, vector control, crisis counselling, injury and disease surveillance, health facility surveillance, pharmaceutical, hazardous substances, and debris. Representatives from the Centers for Disease Control and Prevention, Public Health Service, Substance Abuse and Mental Health Administration, Food and Drug Administration, Health Resource Service, and Office of the Assistant Secretary for Health's Office of Emergency Preparedness were alerted for possible deployment and assessment of conditions in Iowa. Safety of potable water arriving in Des Moines and replacement of syringes and needles were early issues. Potable water was tested by the COE and state labs. The Veterans Administration supplied 50,000 hypodermic syringes for immunizations. The Iowa Department of Public Health, with federal technical assistance, surveyed all 99 counties concerning health issues including reports of increased biting insects. Technical assistance teams from the State EOC visited counties according to a state-developed priority system. Resources were allocated based upon input from the technical assistance teams.

ESF #9 - URBAN SEARCH AND RESCUE

The Defense Coordinating Officer (DCO) and staff were activated on July 12th and operated under elements of this ESF. Logistics support for water purification units and 5,000 gallon water tankers were areas of major involvement. Civil Air Patrol airborne survey and damage assessment missions were executed throughout July.

ESF #10 - HAZARDOUS MATERIALS

This ESF was activated on July 11th, at the Davenport DFO. Technicians from the Environmental Protection Agency were mobilized

to identify potential hazardous waste problems. Aerial flights and photographs assisted in identifying areas requiring on-site evaluations. Local fire department reports assisted in locating areas of potential concern. Abandoned containers were collected, analyzed, and disposed under controlled conditions. Petroleum-related spills were also evaluated and analyzed. Local efforts were effective in minimizing potential damage. Known chemical storage sites were contacted and warned of potential hazard risks associated with flooding. Household hazardous waste collection was conducted in Polk County. Materials collected included paints, thinners, automotive oils and products, and various amounts of unknown materials. Retrieval operations were successful in collecting hundreds of drums, containers, and tanks from the Mississippi, Des Moines, and other rivers including the reservoirs.

ESF #11 - FOOD

United States Department of Agriculture commodities were requested by only a few sites where shelters were located. The donations for food received through grocery chains and other private sources were generous and generally sufficient to meet local needs. Several truckloads of National School Lunch Program commodities were distributed throughout Iowa and served at many of the American Red Cross and Salvation Army feeding sites. All food was inspected before consumption. Commodity requests ended as emergency food stamps began to be issued in mid-July.

ESF #12 - ENERGY

Power systems and fuel supplies were generally unaffected by the flooding. There were some isolated area electrical outages, including a major outage in downtown Des Moines, however, no major damage resulted to transmission lines. Mobile substations and bypasses around damaged distribution circuits enabled power to be restored to residents. Sandbagging around power generation stations was taken as a precau-

tionary measure and auxiliary generators were mobilized for possible emergency use. There were no gasoline or petroleum shortages or damages. Sixty to ninety-day fuel supplies were sufficient to meet needs until transportation systems were restored.

C. AREAS OF EXCELLENCE

The activation of the State Emergency Operations Center, execution of emergency plans throughout the state, immediate action by the Volunteer and Donations Team, and coordination and cooperation among federal, local and state agencies in securing resources in a timely manner was excellent and key toward effective disaster response.

FEMA's response to the state request for federal assistance, and the organization and function of the Disaster Field Office and Disaster Application Centers were critical in coordinating and delivering disaster assistance.

Quick action by the Governor to activate members of the Iowa National Guard and mobilize state resources provided critical resources to augment city, state, and local efforts in administering relief. National Guard actions in managing the distribution of drinking water in Des Moines were important in satisfying citizen needs.

The use of cellular telephones was instrumental in contacting personnel in an outside, highly mobile disaster situation. A tremendous amount of time was saved in coordination of emergency matters.

The willingness of people both inside and outside of Iowa to volunteer time and personal resources for flood relief was truly remarkable. Numbers of people exceeded needs in certain instances as calls for help went out to fill sandbags, assist in evacuation of people and property, and help with any specific need or task. The cooperation and timely delivery of public infor-

mation was assisted greatly through the media. The issuance of timely, factual information reduced panic and rumor and allowed emergency personnel to deal effectively with urgent matters.

D. RECOMMENDATIONS FOR IMPROVEMENT

Continual refinement of state and local government multi-hazard emergency plans and procedures for disaster response is needed. A comprehensive training program insuring that emergency management personnel throughout state government and disaster coordinators in each county are maintained at a high level of proficiency and readiness is the key to effective emergency response. Functional responsibilities in the state plan need to be greatly expanded and detailed by department or organization. Supporting plans and procedures must be more fully developed at department level. Damage assessment, formalized volunteer and donation management plans, communications, and media operations have been identified as needing additional planning and requiring more formal procedures for future emergencies.

State EOC operations were effective but need additional refinement. The size of the Hoover Building EOC is not conducive to large scale, 24-hour operations. A new, enlarged EOC located at Camp Dodge available in early 1994 will adequately accommodate future emergencies of this magnitude. State department heads should send qualified, key decision makers to the EOC. These individuals must make decisions on behalf of their organization without undue contact with higher level management over extended periods of time. EOC team members should be preselected, trained, and available to quickly respond as emergency situations dictate. Finally, department heads must be committed to 24-hour EOC representation over perhaps several weeks as well as actively supporting full scale training exercises conducted periodically for at least 24-48 hours in duration.

Coordination with FEMA is greatly enhanced when the DFO is located near state government operations. Perhaps an auxiliary or forward DFO could be established on site, however, overall coordination and effectiveness was enhanced when DFO operations were relocated to the capital city after two months of operations in Davenport.

The entire disaster assistance application process involves a great deal of paperwork. Each federal agency should review and streamline their requirements. Ways need to be identified to expedite the delivery of Individual and Public Assistance programs, such as using mobile strike teams to provide information to local governments quickly.

FEMA state liaison personnel should be deployed to the State EOC even prior to the anticipated disaster declaration. States should thoroughly communicate their needs to FEMA and anticipate long term recovery issues early in the disaster.

The FEMA Central Processing Office (CPO) created coordination problems and took control away from the FCO/SCO. The CPO was located out of state, too far from the DFO for maximum effectiveness. Processing applications requires direct interface with the DFO and applicants.

Conflicting river level forecasting information was not coordinated between the Corps of Engineers and the National Weather Service. Both should coordinate and resolve conflicting information to reduce confusion and enhance confidence in published data. Advance warning is needed for selected roadways, levees, and floodplain areas.

Federal agencies should review with counterpart state agencies what assistance is available during disasters. Augmenting state staff with federal officials was especially beneficial in health matters. DFO officials should be kept abreast of agency coordination to prevent conflicting

information being relayed to applicants. Inconsistent information from FEMA regarding substance abuse assistance and counselling created delays in the delivery of these services.

Agencies that used toll free telephone hotlines were effective in informing citizens of emergency issues. Hotlines should be established quickly, widely publicized, coordinated through the EOC, and staffed with knowledgeable personnel. The Consumer Protection Hotline established by the Iowa Attorney General's Office was effective in reporting consumer concerns.

Executive level management would be greatly enhanced with a quick and efficient conference calling capability between all state departments. The current system is outdated and time consuming to set up.

PART III. DISASTER RECOVERY OPERATIONS

A. ORGANIZATION

There is not a clear division between response and recovery operations, and this was especially so during the floods of 1993 as flooding impacted Iowa communities at different times between April and September. Federal and state emergency plans do not specifically address recovery assistance, including the provision of temporary housing; loans and grants to individuals; loans to businesses; and grants to state and local entities provided under disaster assistance programs of FEMA and other agencies. In most cases, recovery activities were conducted concurrently with response activities. The FCO and SCO were responsible for coordinating recovery activities. These operations were initiated in accordance with state priorities and based upon availability of resources which did not conflict with response operations.

Generally, as flood waters receded, local officials transitioned from response to recovery operations. There were numerous recovery procedures considered by local officials during the floods. Funding, infrastructure repair, building codes, hazard mitigation, and delivery of assistance were a few of the major concerns. Immediate actions associated with the initial situation report and preliminary damage assessments were extremely important in planning for assistance. Knowledge and understanding of federal disaster relief was the key aspect of securing quick and effective assistance. During the last week in July, FEMA and state Public Assistance staff conducted Public Assistance briefings throughout the state targeting those counties needing assistance. Additional briefings were conducted based upon needs, some by teleconference. Feedback indicated that these briefings were helpful and expedited the relief effort.

Fourteen stationary Disaster Applications Centers (DACs) were operational with federal and state staffing. County emergency coordinators assisted with site identification and facility accommodations. Mobile DACs extended the outreach into 25 less populated communities.

To expedite Iowa's economic recovery from the floods, the Governor assembled a State Flood Recovery Coordination Team in mid-July. This task was to coordinate an immediate and sustained disaster response to help families and businesses return to normal activities and reduce the continued loss of economic opportunities quickly. Overall goals were to assess the damages to the state regarding personal and public property, agriculture, and business; identify resources available to satisfy needs; educate and inform public and private officials on available assistance; and to provide an overall network of assistance and support to speed recovery operations and funding. The Deputy Adjutant General of the Iowa National Guard/Deputy Director, Department of Public Defense was appointed as the Team Project Officer. Several state department heads were selected as response team leaders in various functional areas.

The Education Assistance Response Team consisted of representatives from the Iowa Department of Education, College Student Aid Commission, University of Iowa, and Iowa State University Extension. The team, unlike other response teams, did not meet together. An



Iowa National Guard liaison officer coordinated with each department to resolve flood related issues.

The Department of Education damage assessment totalled \$3 million for providing statewide counseling to assist in determining loan eligibility, and to provide general assistance to citizens. The College Student Aid Commission damage assessment totalled over \$16 million for student aid and received over \$11 million in the form of grants, loans, and work. Additional funding from recent legislation is expected in 1994. The ISU Extension damage assessment totalled \$600,000 for funding an assistance hotline. Funding was provided through the Department of Human Services.

The Farm Assistance Response Team monitored crop damages reported by government and agricultural agencies. It provided crop yield estimates based upon damage reports and various agricultural agency predictions. The team coordinated information and resource announcements made to the farm community. ASCS was instrumental in providing farm program and disaster aid benefits through state and local county offices. The team coordinated and participated in several meetings throughout the state to receive input from farmers and producers. Infor-

mation regarding disaster and farm program assistance was also shared during these meetings. Interaction and information received from individual producers served to confirm estimated crop damage assessments and projected crop yield information used to project impacts to the overall Iowa economy.

The Health and Human Services Response Team consisted of representatives from Iowa Departments of Public Health, Human Services, Elder Affairs, Inspections and Appeals, Human Rights, and Public Defense, and Iowa State University Extension. The team met weekly between July and November. The team coordinated Stafford Act and supplemental disaster requests submitted to FEMA, Iowa Emergency Management Division, and Iowa Department of Management. The team was instrumental in receiving and implementing federal assistance for mental health, crisis counselling, emergency food stamps, social services, substance abuse and prevention, Iowa Rural Concern Hotline, elderly outreach, migrant worker gas vouchers, disease control surveillance, environmental health, communication, assessment, TB programs, primary care, and community action agency programs. This team provided significant support to state department efforts to help flood victims. By coordination with other agencies, the



team helped reduce duplication of effort, fill service gaps, improve communication with federal and state agencies, and provide information to federal, state, local officials and applicants about the availability of services.

The Housing Assistance Response Team consisted of representatives from the Iowa Department of Economic Development. The team was instrumental in obtaining federal funding for housing repair, acquisition and demolition, relocation, floodproofing, and infrastructure serving sites for new or temporary housing for flood victims. Additional information in this area of assistance is included in the IDED After Action Report in Annex A.

The Industrial, Commercial, and Dislocated Worker Response Team consisted of the Iowa Army National Guard, Iowa Departments of Economic Development and Employment Services, the Iowa Insurance Commission, and the Division of Banking (DOB). The team met weekly to discuss flood related issues and submit Stafford Act and supplemental disaster requests through Emergency Management Division to FEMA. Major efforts included:

- * Small Business Development Centers (SBDC) communicated with businesses informing them of services available. The SBDC published a disaster loan workbook and aggressively utilized its network of 15 flood coordinators to interact with businesses and industries.

- * The DED produced and mailed to the chambers of commerce and bankers a request for their assistance in publicizing availability of services. The DED worked with Iowa Public Television and Radio Station KIOA, Des Moines, on advertising spots announcing assistance.

- * A Process Action Team (PAT) consisted of DED, Small Business Administration (SBA), Association of Business and Industry, Iowa Bankers Association, SBDC, and the National Guard. The PAT reviewed the entire SBA

application process and provided recommendations for improvement to the SBA. The SBA Administrator approved and implemented the recommendations.

- * Business and banking associations were requested to lend their assistance in publicizing availability of services. The DOB surveyed state chartered banks to access flood damage and provide an estimate for financial aid. Primary area of concern was the agricultural sector. Approximately \$550 million in agricultural loans and \$69 million in commercial loans were affected. The DOB allowed maximum flexibility to loan classification and capital requirements.

The Transportation and Natural Resources Response Team consisted of personnel from the Iowa Departments of Transportation and Natural Resources. The team met weekly from August to October to establish a system to assess damage to Iowa infrastructure, and to define the respective roles of each department in the assessment. Special meetings were held between DNR staff and local citizens and governments affected by flooding in the Great Lakes region of Dickinson County. Staff of both the DNR and DOT appeared before citizens on June 21 to answer lake area resident's concerns about existing and predicted flood conditions. Another meeting in Dickinson County with the Governor on July 10 produced an agreement with the National Guard and the Army Corps of Engineers to commence an emergency water control project that ultimately provided relief to area residents. Technical assistance was provided throughout flood recovery operations concerning floodplain protection, levee repair, and regulatory requirements for municipal wastewater treatment systems.

The Volunteer, Clean Up and Donation Coordination Response Team consisted of personnel from major volunteer organizations, church groups, community service groups, the Governor's Office for Volunteerism, Emergency Management Division, National Guard,

and others. This team initially functioned in conjunction with the State EOC with Emergency Management Division as the lead agency. Unsolicited goods started to arrive within the state. Telephone calls offering donations of cash, goods, and services began to overwhelm volunteer coordinators. A policy was established that goods would not be accepted into the state unless a volunteer group, government agency, or private group was willing to accept responsibility for the receipt and distribution of accepted goods. A process of referring goods and services was established and implemented. Immediate needs were separated from future needs and matched with available donors. Donors were contacted within twelve hours and informed whether the goods, services, or other resources could be used. Donations and resources were entered into a data bank and reported daily to the team, management, volunteer agencies, and county agencies. Cash donations were accepted by volunteer organizations. An account was set up (Governor's Flood Fund) for donors who chose to meet other unmet needs not handled by established volunteer agencies. Local donations were accepted directly by local organizations. Local agencies were able to submit needs to the State EOC team. Later efforts by the team focused on unmet needs and requirements to formalize procedures for volun-

teer and donation management during future disasters. Coordination at the local level is necessary to insure volunteer resources are efficiently provided to those in critical need. Volunteer resources were very generous and abundant from citizens and businesses across Iowa, the United States, and other nations. Efficient and effective management of these resources was a continuing requirement and will continue for future emergencies. Fully coordinated, formal plans and procedures for volunteer and donation management must be included in state and local multi-hazard plans.

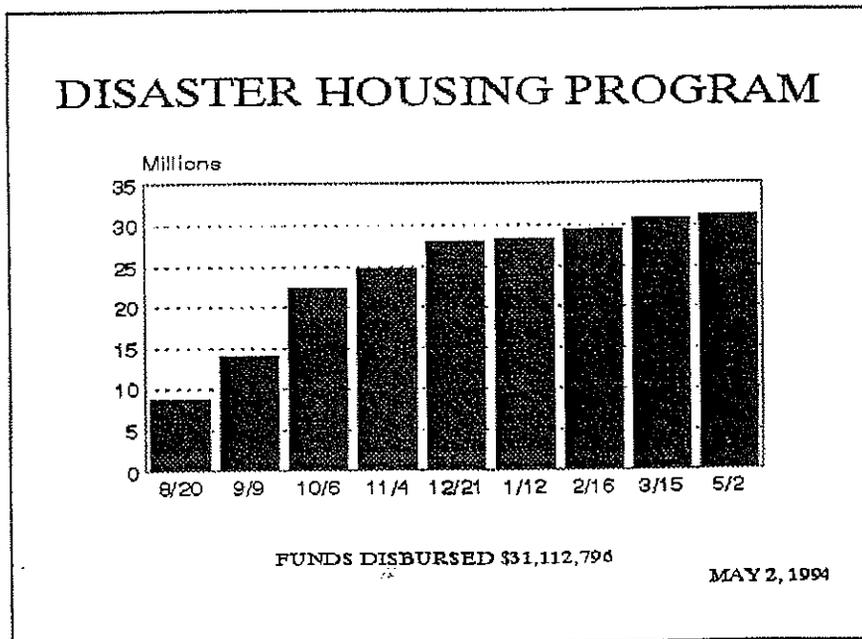
The Flood Recovery Coordination Team was instrumental in obtaining resources for Iowans and greatly reducing the economic losses from the impact of the flooding in each community. The team remained active into 1994 with participation by the Governor, state government department heads, and various public and private agencies involved in long-term recovery efforts.

B. DISCUSSION OF SIGNIFICANT ACTIVITIES

Disaster assistance programs were available under the Presidential Disaster Declaration. Individual applications for assistance were made at Disaster Application Centers and by calling the toll-free disaster teleregistration number. Major elements of most programs are described and highlighted in this section.

1. INDIVIDUAL ASSISTANCE

Disaster Housing Assistance-- This program provided a 100% FEMA grant for up to 18 months for homeowners and renters whose permanent residences were made uninhabitable by the floods. The follow-



ing categories of assistance, without regard to an income means test, were available: rental assistance, home repairs, transient accommodations, furniture rental, mobile homes, and mortgage assistance. Over 18,000 applications were approved totalling over \$31 million. The US Department of Housing and Urban Development (HUD) made emergency arrangements to help flood victims with repair or replacement of homes, and to prevent loss of homes through foreclosure. Qualified citizens displaced from their home or apartment were eligible to purchase a replacement home with 100 percent financing, no money down, using HUD's mortgage insurance assistance. Their previous residence must have been destroyed or damaged to such an extent that reconstruction or replacement was necessary. HUD also had a special mortgage insurance program available for major repairs or rehabilitation of homes. Help for homeowners wishing to relocate out of a flood zone or to elevate was available through the Community Development Block Grant (CDBG) Program.

Emergency Assistance -- Emergency food, clothing, shelter, and medical assistance to individuals and families were available, as well as referrals to church groups and other voluntary agencies. Benefits disbursed by the American Red Cross, Salvation Army, United Way, Governor's Flood Fund, and others exceeded \$20 million. Additionally, over \$250 thousand in benefits were disbursed by area volunteer organizations to flood victims.

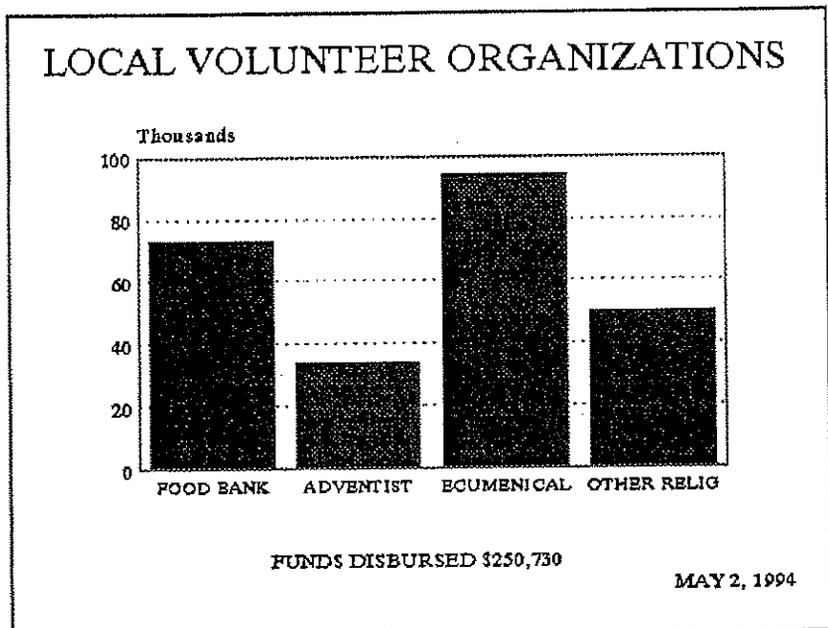
Disaster Food Stamps -- Flood victims in 55 counties applied for food stamp assistance and received nearly \$2 million in coupons for over 6,000 households from July 17th through July 30th.

Home/Personal Property Disaster Loans -- Disaster loans through

the Small Business Administration (SBA) were available to homeowners and renters for restoring or replacing disaster damaged real and personal property. Homeowners applied for loans up to \$100 thousand to repair a flood damaged primary residence. Up to \$20 thousand was available to homeowners and renters for personal property losses. Loan amounts were limited to the amount of uninsured, SBA-verified losses, and could be increased by up to 20 percent for mitigation measures to help prevent future losses to damaged real property. Interest rates were generally at 4 percent with a few at 8 percent, both for periods up to 30 years. Over 2,700 applications totalling over \$28.6 million were approved.

Community Action -- The Community Action Agencies provided a funding source for low-income individuals and families. Included in their services were grants for home and personal property repair and replacement, energy assistance, and weatherization. There was a \$2.5 million allocation for Community Services Block Grants.

Individual and Family Grant Program -- Grants of up to \$11,900 were available for eligible flood victims to help meet serious disaster-related needs or necessary expenses not covered by other assistance programs or insurance. The



program was administered by the state with costs shared 75 percent by FEMA and 25 percent by the state. An application was approved only after SBA determined that the applicant did not have the ability to repay a loan. The IFG program increased its minimization benefits by awarding 1,152 grants (\$1,194,449) to fund elevation or relocation of utilities damaged by the floods. This helped disaster victims protect water heaters, furnaces, and main utility panels from future flood damage. IFG also established a new program, Emergency Living Expense, for applicants who were forced to evacuate and were out of their homes for a period of time. This helped people endure the hardship of being forced to find living accommodations elsewhere resulting in out of pocket expenses. Approximately 600 Emergency Living Expense grants were issued totaling approximately \$500,000. IFG funding was also available for buyout programs in selected Iowa communities. Up to \$11,900 was available for over 120 homes that were at least 50 percent damaged and homes that could not be rebuilt because of zoning requirements. Overall, over 7,900 grants totalling over \$9.2 million were approved.

The Iowa Department of Human Services was provided a FEMA-funded crisis counselling grant. The grant was used to support the Iowa Concern Hotline for confidential assistance and referral

for stress (included Spanish language services). The department funded local community mental health providers for free individual crisis counselling and to conduct outreach screening and diagnosis, referral, and local consultation and education services.

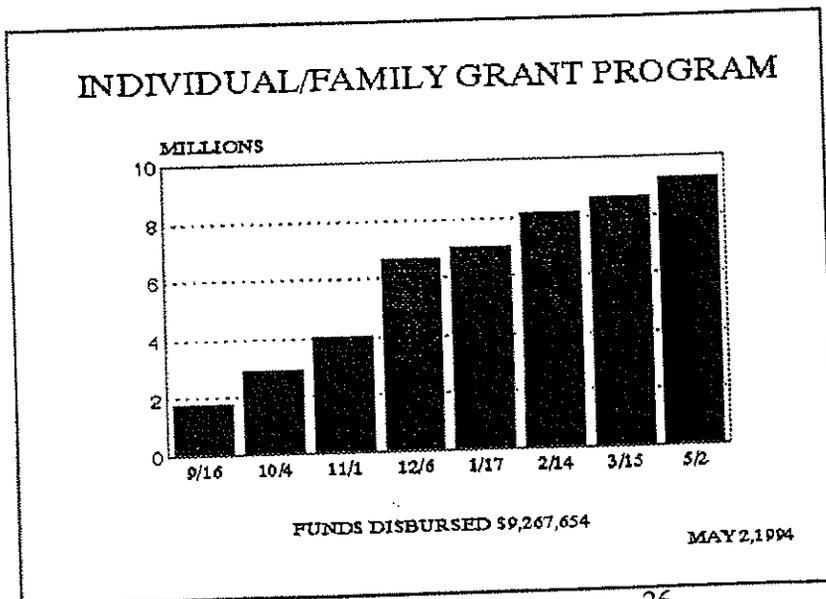
The Iowa Department of Public Health was initially provided funds for disease surveillance and control, stress and mental health needs, local community health agencies, migrant health, assistance to the elderly, and aid to low income citizens.

Aging/Elderly Assistance -- Over \$1.6 million was disbursed for outreach, home repair and clean up, transportation, meals, and health care to meet the needs of the elderly.

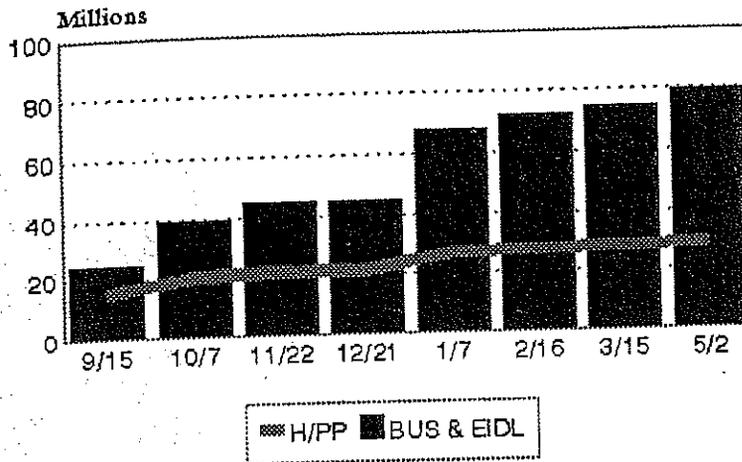
Disaster Unemployment Assistance -- A 100 percent federally funded program provided up to 26 weekly benefits to those out of work due to the disaster, including self-employed persons, farm workers, farmers, and others not covered under regular unemployment insurance programs. Over 9,540 applications were approved by local Job Service offices. Over \$39 million in benefits have been disbursed under this program. Migrant workers unable to continue work were given assistance to allow for their return to their homes.

Tax Assistance -- Federal and state tax authorities allowed casualty losses that were suffered on home, personal property, and household goods to be deducted on income tax returns if losses were uninsured or underinsured. Taxpayers could file amended 1992 returns and receive tax refunds. Local tax assessors provided assistance on possible property tax relief.

Job Assistance -- A program was created to allow local agencies to provide temporary jobs for up to



SMALL BUSINESS ADMINISTRATION



TOTAL FUNDS DISBURSED \$108,527,300

MAY 2, 1994

six months or \$6 thousand in wages. Jobs involved cleaning up public and private non-profit property, restoring public utilities, and performing other disaster response activities. Over 1,659 Iowans were employed under this program and were paid prevailing wages for the type of work performed. Funding for this program came from a \$15 million special emergency grant from the US Department of Labor.

Other Assistance -- Several forms of other assistance were provided to flood victims including insurance, legal, social security, veterans, financial, and consumer protection.

2. SMALL BUSINESS AND FARM ASSISTANCE

Business Disaster Loans -- SBA provided disaster loans up to \$1.5 million for businesses to repair or replace destroyed or damaged business facilities, inventory, machines, or equipment. Small businesses unable to pay bills or meet expenses as a result of the flooding could also apply for SBA economic injury disaster loans generally at 4 percent interest for up to 30 years. Over 1,256 loans were approved

totalling nearly \$80 million. A major effort was initiated by state government leaders, business community leaders, federal officials, and others to revise and streamline the SBA business loan application process and procedures. This effort resulted in more user friendly application requirements that were approved and implemented immediately by SBA.

Farm Assistance -- The Farmers Home Administration (FmHA) made

loans to farmers operating or managing a farm at the time of the flooding. Emergency loans for 100 percent of uninsured physical losses to pay for replacement buildings, equipment, livestock, and supplies were made at 4.5 percent interest or less for up to 40 years. Loans for 80 percent of uninsured production losses to pay creditors, buy feed, and pay operating and family living expenses were made at 4.5 percent interest or less for up to normally 20 years. Producers must have suffered at least a 30 percent loss in one crop or livestock enterprise. Regular loan and loan guarantee programs to assist flood victims were also available. Loan restructuring and other benefits were provided to farmers who had already received FmHA assistance. Over \$25 million was disbursed by FmHA. Numerous programs were available from the Agricultural Stabilization and Conservation Service (ASCS) through local ASCS offices to assist farmers victimized by flooding. Disaster payments to eligible farmers who suffered at least 40 percent loss to uninsured crops may reach \$400 million.

Additional crop and livestock feed programs as well as haying and grazing programs were available. Also, cost share assistance (federal

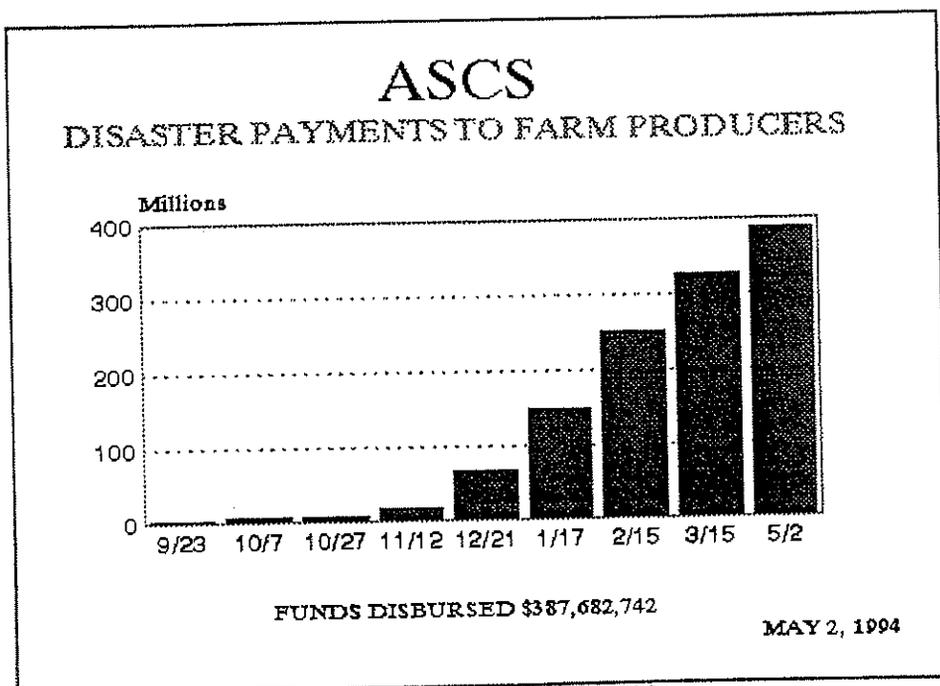
64%/individual 36%) was available to producers who applied for emergency conservation programs (ECP) funds, such as debris removal, repairs to land and water conservation structures, and permanent fencing. ECP funding is expected to reach \$11 million. Two other programs offered landowners an alternative to producing crops on flood-prone farmlands. The Emergency Wetland Reserve Program (EWRP) was established as part of the federal flood relief appropriation in 1993. Landowners, in exchange for a one-time payment, agreed to a permanent easement restricting the land for wetlands use. Eventual buyout of the land is being planned. Iowa farmers offered to enroll over 17,000 acres into the program. Over 5,300 acres were initially enrolled with farmers receiving \$4.2 million. Those acres will improve surface water quality, add land to wildlife habitat, provide an alternative to levee repair, and reduce damages from future floods. A similar program, the Wetland Reserve Program (WRP) accepted applications in March, 1994. Farmland that was not flooded in 1993 was eligible as well as flood-prone land. Officials have greater discretion in selecting wetlands that meet specific state environmental goals. Over 75,000 acres in 20 states (including Iowa) are expected to be approved during this enrollment.

3. PUBLIC ASSISTANCE

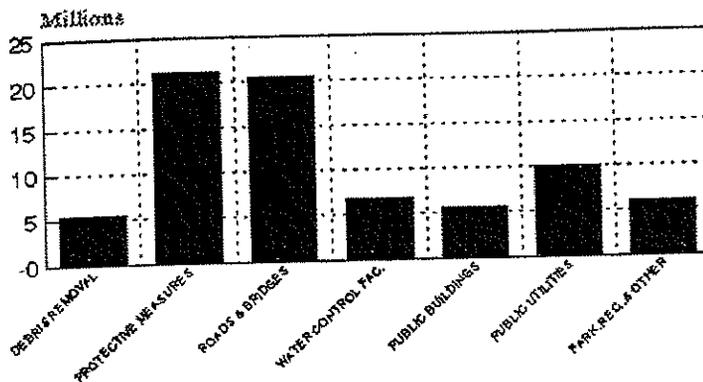
In addition to Individual Assistance, another major source of disaster funds was Public Assistance funding. Eligible applicants were state and local governments, as well as certain private non-profit organizations to assist with restoration projects. Categories of work included emergency work (debris clearance and protective measures) and permanent work (road systems, water control facilities, public buildings and equipment, public utilities, public parks, and recreational areas).

Under the Stafford Act, the federal share of Public Assistance must be not less than 75 percent of the net eligible cost of repair, restoration, reconstruction, or replacement activities carried out during relief operations for a Presidentially Declared Disaster. A new cost-share adjustment policy was announced by the FEMA Director on September 2nd. It raised the federal share of Public Assistance costs to 90 percent once a \$64 per capita damage threshold was reached. The Governor immediately requested a waiver of the \$64 per capita threshold. He also asked for a cap on the state and local match using a formula of 25 percent of \$10 per capita. After much state, regional, and national

interaction, the Public Assistance cost share was adjusted to 90 percent federal and 10 percent state and local for the Midwest flooding. The Governor then, in an effort to ease the financial burden on local flood-affected communities, requested the state to pay the entire 10 percent share of Public Assistance costs. This action resulted in Iowa communities saving millions of dollars. Earlier attempts by the Governor to have a full waiver of the



PUBLIC ASSISTANCE



FUNDS APPROVED \$75,123,472

MAY 2, 1994

state and local cost-share match were not approved.

Disaster applicants submitted notices of interest for emergency needs and repair. State and federal inspectors surveyed identified damages and prepared Damage Survey Reports (DSRs) to outline the scope of work, estimate repair cost, and document any completed work. FEMA obligated the 90 percent federal share for all approved DSRs. The individual DSRs currently exceed 11,000 and were the basis of the project application for a subgrantee (currently 1,105). Funds were available for the state to make payments to individual applicants as FEMA obligated the funds, projected to exceed \$100 million. The entire federal share of the estimate was paid upon approval for small projects, and on a percentage completed basis for large projects. The state share was paid upon completion for small projects. Large projects received an advance payment of one-half (5%) of the state share with the remainder paid upon project completion.

Community Development Block Grants -- Iowa received \$39 million from the US Department of Housing and Urban Development to assist flood

recovery efforts. This money was used to meet needs not covered by other emergency assistance programs. The initial allocation was earmarked for residential damage relief, and later allocations included assistance for damage to businesses and public facilities. If funds were available for public facility and housing projects not covered by another source of assistance, they were awarded by the Iowa Department of Economic Development through Community Development Block Grants (CDBG). Communi-

ties applied for these funds through the regular CDBG imminent threat contingency fund process, which involved submitting a letter describing the project and estimated total cost. Funds were limited to those cases where local resources were severely strained and capabilities to raise additional revenue (i.e. property tax and user fees) were not practical alternatives.

CDBG Business Flood Recovery -- Cities and counties could seek financial assistance on behalf of businesses in imminent danger of ceasing operation entirely. Assistance was made available to businesses that were unable to obtain recovery assistance elsewhere in an amount or form sufficient to aid in their recovery. Assistance was provided for physical losses and, in some cases, for economic injury. The amount of assistance provided was limited to an amount necessary to return the business to a viable level of operation. Priority was given to industries and retail businesses that are major employers or provide essential services to the community.

Cultural Affairs Funding -- Iowa received nearly \$1 million from federal agencies for cultural restoration activities and historic preservation

projects created by the flooding. Additionally, state grants and donations were provided to needy recipients.

C. AREAS OF EXCELLENCE

Feedback from the small business community identified an immediate need to streamline the SBA business loan application process and the loan documentation required. An action team consisting of small business owners, business, industry, and banking leaders, and state and federal government officials examined the loan application process and submitted recommendations to SBA to revise the process and refine required supporting documentation. SBA was helpful and quick to approve and implement suggested improvements. Most of the several thousand small businesses in Iowa impacted by the floods found the revised process to be more user friendly and less time consuming. The result of these efforts proved to be a model for problem solving and cooperation between the provider of disaster assistance and those victimized by the flooding.

Another effort that paid huge dividends was the use of outside technical expertise to augment functional activities providing disaster relief. Relocation of personnel assets were made in agricultural offices to assist with disaster application paperwork and damage assessments. Federal and state personnel from other states and regions were brought in to augment state counterparts in state government. Local and out of state military assets were mobilized for augmentation of efforts down to local and community level. Many businesses used similar procedures to bring in outside assistance to repair facilities and normalize outputs of goods and services badly needed by Iowa citizens. Quick and effective mobilization of personnel and resources was the key to effective delivery of assistance to flood victims who were suffering from stress and unrest.

The creation of the Flood Recovery Coordina-

tion Team and its impact in pursuing an immediate and sustained response to individuals, families, businesses, and farmers was instrumental in reducing the loss of economic opportunities caused by the floods. Response teams staffed with action personnel focused on assessing needs, identifying resources and facilitating the delivery of resources into priority areas of need. The leadership, actions, and involvement by personnel from both the public and private sector resulted in millions of dollars of recovery assistance for Iowans. The state was quickly back into full operations and "open for business".

D. RECOMMENDATIONS FOR IMPROVEMENT

Each FEMA regional office has a different view in the interpretation of laws and regulations concerning disaster relief. This disaster brought three different regions successively into the state to administer relief, causing confusion and the expenditure of additional resources to deconflict issues. Although the need for additional regional staffing was understandable, a standard application of disaster relief is needed across FEMA regional boundaries.

There is no permanent FEMA presence in Iowa. This state has had five Presidential Disaster Declarations for flooding alone since 1990. It is therefore recommended that FEMA establish a minimum full time permanent presence near state government. A forward regional presence or field office would improve coordination on a daily basis, improving preparedness and facilitating the transition to emergency operations.

There is too much overlap in federal assistance programs. It causes state and local governments, as well as individuals and businesses to spend time sorting out avenues of relief. This is especially visible in the Public Assistance program. It is recommended that FEMA conduct an in depth review and analysis of all assistance programs with a goal of streamlining, eliminating overlap,

and deconflicting various program elements. Also, it is recommended that FEMA further increase their response activities. Increased use of mobile strike teams to provide relief information to local citizens and governments would be of tremendous assistance.

In an effort to share resources, a more regional approach to disaster assistance could be provided. Regional or multi-state agreements for resource sharing and funding could be developed to assist one or more states within a region. This would make state resources available to a disaster area quickly and be more cost-effective than the current national response effort.

The cost-share arrangement for federal and state sharing of Public Assistance program funding was favorably adjusted in September. Considerable energy and resources were expended in this effort. The state and local governments could reduce future anxieties and frustrations if a more consistent and clearly defined cost-share arrangement was provided.

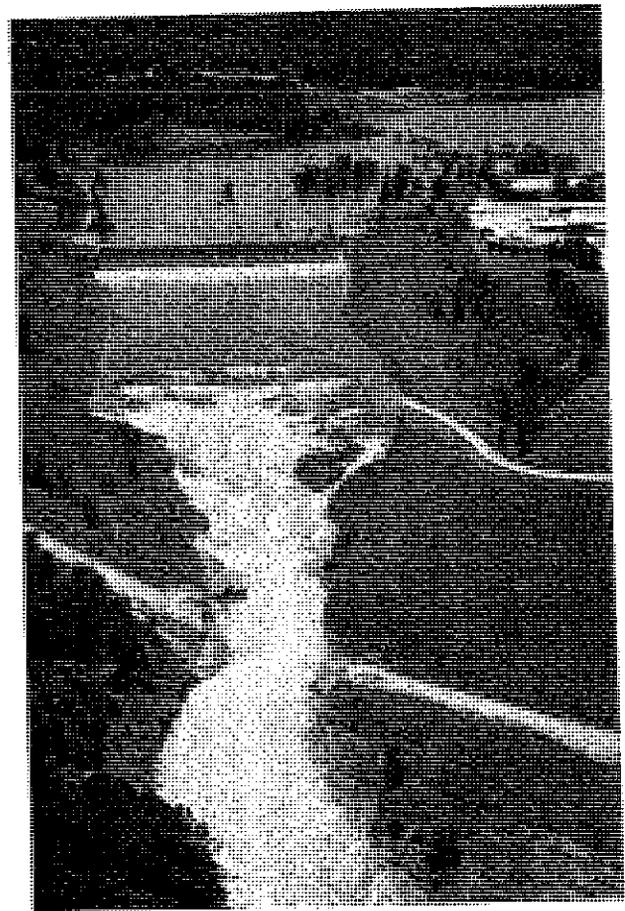
The federal, state, and local damage assessment process needs to be streamlined into a joint and coordinated function. Inspections should fulfill all assessment needs, be prioritized by extent of damage, and be shared by computer for uses among various agencies. Consideration should be given to the use of block grants for small damage sites, giving the state more latitude in the use of funds. Contract inspectors allow for more rapid assessments, however, a system needs to be developed which requires complete performance standards with required technical competencies to fulfill the needs of all agencies.

Environmental reviews associated with elevation and relocation of houses appear unnecessary as the potential harm to the environment is nearly nonexistent. Waiver of this requirement or use of an expedited environmental review process is warranted. A minimum baseline environmental standard should be established rather than an assessment or review. Also, this program should

be combined with other housing programs to avoid overlap and duplication.

Lack of sufficient funding in various disaster programs causes states to waste time combining or layering programs together. Levee repair and restoration, and housing assistance are two areas of specific need. The lack of individual program funding and the timely release of funds severely hampered these programs. Funding should be quick if recovery efforts are to be effective and assist in future hazard mitigation efforts.

The regulation and management of the several large reservoirs by the Corps of Engineers need review and refinement. Associated supporting emergency plans also require revision. The duration of the rains, record reservoir levels, record water releases, and record flooding levels on most Iowa rivers and streams provides new data that can prove beneficial in future reservoir management. Other factors such as



siltation, forecasting, and coordinating state and local areas of concern are important to effective reservoir regulation plans.

River level forecasting needs refinement and revision. The National Weather Service (NWS) has the mission of providing all flood forecasts. Improved coordination with the COE to deconflict information and provide greater warning time for flooding is needed. The use of additional, more effective stream gauging systems that allow for real time evaluation and warning is badly needed. Increased NWS representation in the State EOC will assist in the overall conduct of emergency operations.

Disaster relief and assistance for small businesses needs to be revised and improved. Delays in receiving National Flood Insurance advances and settlements caused difficulties in maintaining cash flow. Funding to pay for immediate recovery needs, temporary relocation, and replacement inventory and supplies was needed. Helping businesses get back on their feet is more cost-effective than funding unemployment and other associated costs. A small business program needs to be developed and funded nationally to provide grants, advanced loan money with deferred payments, and government-backed credit guarantees on replacement inventory and supplies. These benefits would assist low risk businesses return to normal, productive operations.

The National Flood Insurance Program is not popular among Iowans. A streamlined review of program guidelines is recommended in an effort to provide comprehensive, low cost insurance to needy citizens. Perhaps costs and benefits could be adjusted as the program has been self-supporting through policyholder premiums without federal assistance for several years. A more user friendly program combined with increased marketing and consumer information would increase coverage throughout Iowa.

Regulations for determining payments to self employed individuals, especially farmers, are

inconsistent with other workers, and are perceived to be unfair and unjust. Regular unemployment insurance is based upon gross worker earnings while disaster unemployment insurance for self-employed personnel is based upon net earnings. It is recommended that the US Department of Labor review and revise this program to eliminate unfair and unjust policies. The entire program, instructions, manual, and forms have not been updated in several years. A thorough review and revision is badly needed to deliver this vital form of assistance to citizens, especially those in an agricultural state.

PART IV. HAZARD MITIGATION

HAZARD MITIGATION GRANT PROGRAM

This program is designed to provide cost effective measures to reduce or eliminate long-term risk to human life and property from natural hazards. FEMA's Public Assistance program and the programs of other federal agencies were available as the primary means of funding. The Hazard Mitigation Grant Program provided an opportunity to fund measures that could not be funded under other program provisions. The federal share of hazard mitigation projects could not exceed 75 percent of project cost with at least a 25 percent applicant share matched with dollars or in-kind services. The total federal funding could not exceed 15 percent of the total estimated federal grant assistance (excluding administrative monies) provided under the Stafford Act. Eligible projects included property elevation, acquisition, relocation, retrofitting, flood drainage area improvement, and improved mitigation standards. FEMA has provided the state with over \$31 million in Hazard Mitigation Grant funding to reduce the hazards associated with flooding. That effort is primarily oriented at elevation, relocation, or acquisition of flood-prone homes throughout Iowa. Several funding sources were sought to finance mitigation mea-

asures in each of Iowa's 99 counties, all declared as disaster areas. HMGP funds are being matched with a substantial portion of Community Development Block Grant funds to finance projects for applicant communities. Total mitigation costs are expected to rise as 72 of over 120 potential applications identify over \$50 million for total project costs.

Housing issues have received the primary project emphasis. Most applications involve moving people who presently reside in a floodplain to areas less likely to suffer flood damage. Currently, 37 projects or applications involving over 1,000 homes need financial assistance from HMGP. Elevating, outright purchase or demolition, or relocating homes to higher elevation will require over \$24 million in HMGP funds for projects totalling over \$32 million. CDBG funds were matched with HMGP funds, resulting in little or no local government funding for project completion.

The US Economic Development Administration is expected to provide up to \$39.3 million for flood mitigation projects. These projects include community development and infrastructure improvements.

Iowa set the pace, nationally, regarding plans to assist homeowners voluntarily leave floodplains. The City of Des Moines was the first community in the nine Midwestern states to develop, implement, and purchase a flood damaged property. That purchase on December 21, 1993 was a milestone in the property acquisition policy development effort between FEMA and the state. This event culminated in establishing a new national policy for the purchase of flood damaged properties. A conference designed to assist applicants from Iowa and surrounding states become familiar with property acquisition processes was held in January. This resulted in FEMA's approval of the procedures developed by the state.

NATIONAL FLOOD INSURANCE PROGRAM (NFIP)

Administered by the Federal Insurance Administration, the NFIP is a federally-backed program that makes low-cost flood insurance available to residents of communities in exchange for the community's adoption and enforcement of NFIP floodplain management regulations. The program is self-supporting in that all flood insurance claims and operating expenses are funded through policyholder premiums.

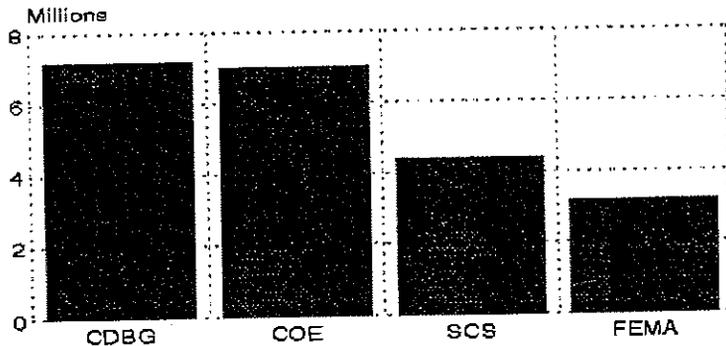
Over 1,000 claims were approved for losses totalling over \$15 million for Iowans by December, 1993. Additional claims were processed by NFIP. In August, there were 6700 policies in force. By December, that amount had risen to over 9000. Out of 800 Iowa communities, 394 participate in NFIP, and an additional 194 have completed mapping requirements. Iowans with NFIP flood insurance are well below the national average of 17%.

NFIP also has provisions to purchase damaged insured property and to provide property owners with the opportunity to relocate to nonflood-prone areas, providing damage criteria is met. Property owners are offered a settlement check based on fair market value less the amount of their claim settlement.

GEOGRAPHIC INFORMATION SYSTEM

In an effort to improve floodplain management, the state proceeded with the development of digitized computer data to assist in the review of hazard mitigation and levee alternative programs for flood disasters. This data will also have application for damage assessment and emergency response efforts in future disasters. Data will include roads, levees, utilities, railroads, bridges, soils, public lands, historical structures, and other areas. The Corps of Engineers acted as a support agency in this effort scheduled for completion in spring 1994.

LEVEE REPAIR PROJECTS



POTENTIAL FUNDING \$21,802,768

MAY 31, 1994

Iowa Department of Natural Resources
 Iowa Department of Economic Development
 Iowa National Guard, Iowa Department of Public Defense

In evaluating applications for levee repair and restoration, each agency considers: nonstructural alternatives and design modifications that could provide greater local benefits of flood control, reduction of future potential flood damages to the applicant and

LEVEE RESTORATION AND MANAGEMENT

An Interagency Levee Review Committee for Iowa was organized to ensure the proper consideration of relevant options for repair, reconstruction, and other alternatives to levee restoration necessitated by flood damage.

The overall goal was to achieve a rapid and effective response to the damaged flood control system that will minimize risk to life and property, ensure a cost-effective approach to flood damage mitigation and floodplain management, and protect important environmental and natural resource values.

The Interagency Levee Review Committee for Iowa consisted of representatives of the following federal and state agencies:

- Federal Emergency Management Agency -- Chair
- US Army Corps of Engineers
- Soil Conservation Service
- US Fish and Wildlife Service
- Environmental Protection Agency
- Economic Development Administration
- Emergency Management Division, Iowa Department of Public Defense

adjacent upstream and downstream localities, lower long-term cost to the federal government, and natural resource protection. Agencies are encouraged to include other interested agencies during their evaluation process, to the extent practicable. Levee repair and restoration is extremely complex. There could be up to 300 individual levee repair projects in Iowa. Many of these projects do not fit into the scope of work covered by federal funding.

There are differences in repair projects. The SCS makes no emergency repairs, as all projects are reconstructed as permanent projects, whereas both FEMA and COE authorize emergency repairs. There are differences in match requirements, 75%/25%, 80%/20%, or 100%. In some cases the applicant can apply for more favorable benefits in certain programs. FEMA can authorize the use of Public Assistance (Section 406) funds for alternate projects such as relocation, buy-out, or elevation. The SCS and COE cannot use repair or reconstruction funds for any other use. SCS has funds for the Wetland Protection Program. The COE has no alternate funds. If applicants refuse repair, the funds are used for another repair project. Additional time and information would assist in making a more complete assessment of the impact of levee



repairs in a basin-wide area. A FEMA Hazard Mitigation technician should to be assigned to participate in the initial review, field inspection, and design to propose and assess the alternatives to repair or reconstruction to the previous condition.

PART V. DISASTER SUMMARY

The Midwestern floods of 1993 were record events, flooding over 17 million acres in nine states. Iowans were not alone as millions of people were affected across a wide region of the United States. In Iowa, the floods were unique in that they were of long duration and impacted every county. Environmental losses relating to erosion, siltation, and water pollution were severe. Economic impact was staggering. Over \$2 billion in crops were lost compared to the previous year. Great damage was done to transportation, commerce, and industry. Impact on state and local governments was great. An immense amount of energy was expended to conduct response and recovery activities to aid citizens and rebuild the state infrastructure. Social impact was felt statewide. Unbelievably few losses of life and no major illnesses or diseases

were offset by a huge disruption in homes, jobs, and overall quality of life.

Finally, the floods reminded Iowans that no one can prevent natural disasters. Damages can be minimized through effective floodplain management and maintaining emergency preparedness at high levels of readiness. These areas must receive primary attention to reduce the risks of future widespread flooding and to protect the most precious of all resources, the citizens of Iowa.

IOWA FLOOD
DISASTER REPORT

ANNEX A

DEPARTMENT/AGENCY
AFTER ACTION REPORTS

IOWA DEPARTMENT OF AGRICULTURE AND LAND STEWARDSHIP

FLOOD DISASTER AFTER ACTION REPORT

I. AREAS OF RESPONSIBILITY

Evaluated and promoted the role of soil and water conservation practices in flood control and infrastructure protection.

II. ORGANIZATION DURING EMERGENCY OPERATIONS

Normal department staffing including field staffing in each Soil Conservation Service office.

III. SUMMARY OF EMERGENCY OPERATIONS

A. DISASTER RESPONSE PHASE

Technical assistance, field inspections, and damage estimates provided by field staff.

B. DISASTER RECOVERY PHASE

Severe storms during summer months are common in Iowa. Every year there are isolated situations where heavy rain and runoff cause localized damage to cropland and county infrastructure. What is not common is (1) the extent of distribution and (2) the frequency of occurrence of severe storms that Iowa experienced from the Fall of 1992 through the Summer of 1993. Storm after storm on saturated soils led to severe flooding problems over virtually the entire state.

Damage to the state's agricultural infrastructure was great. It may take years to fully recover. For example:

- * 10 percent of the state's terrace systems (1) suffered damage due to cutting (structural failure), or (2) filled with sediment that will need to be removed for them to continue to perform at their designed capacity.

- * 80 percent of the waterways two years old or less, suffered cutting or gully damage that will require reshaping and reseeding.

- * 2.4 million acres of cropland suffered severe erosion damage (more than 20 tons/acre soil loss), due to upland erosion, or bottom land scouring when creeks and rivers left their banks.

IV. AREAS OF EXCELLENCE

Agricultural cropland damage estimates for the state exceeded \$30 million. But it is important that this damage be put in perspective. Successful conservation achievements far outweighed failures. Most of the conservation systems of the state performed well, despite conditions that exceeded their design and capacity.

These successes were due to three factors:

- * Sustained effort over the years on the part of farmers and conservationists to install total conservation systems to protect soil resources.
- * Recent acceleration of practice installation in response to the approaching Food Security Act and conservation compliance deadlines.
- * Dramatic increases in no-till and other residue management farming for economic as well as conservation benefits.

Damage surveys of Iowa farmland show that much conservation progress has been made over the last ten year period. In the months April - August 1993, the state received more than 17 inches excess rainfall. This compares to 9 inches excess in May - July 1990 and 5 inches excess in April - June 1984. Yet, the number of cropland acres with severe erosion problems does not mirror the excess rainfall amounts. Over 2.4 million acres of cropland were damaged in 1993, but is considerably less than the 4 million acres damaged in 1984, a year with much less rain and flooding.

In fact, comparing 1993 to 1984; excess rainfall in 1993 was 3.4 times as great as 1984, but cropland acres damaged due to severe erosion were 40 percent less. Conservation practice installation over the past ten years has done a remarkable job of protecting Iowa's cropland soils.

Between 1984 and 1993, conservation practices established by Iowa farmers are estimated as follows:

2,500,000	acres no-till
1,500,000	acres conservation tillage
200,000	acres protected with terraces/structures
1,800,000	acres protected with contouring
100,000	acres protected with stripcropping

6,100,000	acres with conservation practices established

Assuming a 35 percent overlap of practices established on cropland acres, it is safe to assume that 4,000,000 acres have benefited from conservation treatment. Add to that figure the land protected by the Conservation Reserve Program and those acres damaged by the 1993 rain and floods, and it becomes possible to estimate the number of acres that would have been severely damaged were these floods to have occurred ten years ago.

4,000,000	acres that were not treated in 1984
2,200,000	acres enrolled in the CRP
2,400,000	acres damaged in 1993

8,600,000	acres that would have been damaged in 1984

Cropland damage from storms of the past year would have been 3.5 times greater in 1984 than it was in 1993.

The cost of this damage can be estimated as follows:

\$ 0.80/acre	soil depletion damage
4.75/acre	annual sheet and rill erosion damage
8.82/acre	ephemeral cropland gully erosion

\$14.37/acre	cropland damage

Comparing this year's cropland damages (2,400,000 acres x \$14.37/acre) of \$34.4 million to the potential damages (8,600,000 acres x \$14.37/acre) of \$123.5 million that could have occurred illustrates the value of erosion protection.

Although more difficult to quantify, the reduced cropland erosion across the state undoubtedly reduced (1) downstream flooding impacts, and (2) damage to infrastructure such as roads, bridges, and urban areas. Conservation practices on the agricultural landscape of a watershed also reduce the amount of soil deposited in the state's lakes.

Flood waters are very dirty and carry an incredible sediment load. However, more than half of this sediment load comes from floodwater scouring and streambed erosion; considerably less than half comes from upland cropland erosion.

The 1993 data shows that cropland soils in Iowa were better protected from erosion in 1993 than in previous years, and as a result, the damage sustained by the state's infrastructure was considerably less. For these reasons, it is important that progress in the establishment of conservation practices across the state be accelerated, rather than diminished. Evidence clearly substantiates the value of soil conservation practices and conservation tillage systems, protecting soil resources and diminishing flood impacts.

V. PROBLEMS/ISSUES: None

IOWA DEPARTMENT OF COMMERCE

FLOOD DISASTER AFTER ACTION REPORT

I. AREAS OF RESPONSIBILITY

The Iowa Department of Commerce provided assistance during the floods of 1993. Specifically, the divisions of insurance, banking and utilities answered questions, monitored damages and supervised the businesses within their jurisdictions so that service was effectively maintained throughout the disaster.

II. ORGANIZATION DURING EMERGENCY OPERATIONS: Normal

III. SUMMARY OF EMERGENCY OPERATIONS

The Banking Division provided assistance to businesses and individuals by alerting the communities to low interest loans which were available at local banks. The Bankers Association helped in completing loan forms and alerting businesses about low interest loans.

The Utilities Division monitored damages of utility companies throughout the state. They notified and encouraged utilities to apply for FEMA aid in the event there were losses. Special meetings were held to keep communities apprised of changes in service.

The Insurance Division set up a hotline staffed by insurance experts to answer questions regarding insurance coverage. Public service announcements were aired both on television and radio notifying the public of assistance on insurance matters. A mediation service was established to help companies and their insureds handle questions of coverage due to flooding. All flood related insurance questions were filtered through a flood project coordinator.

IV. AREAS OF EXCELLENCE

Of special note was the mediation service which handled approximated 125 complaints. This voluntary program was heartily embraced by the insurance industry. All parties involved showed good cooperation in reviewing policy coverage and damage issues. Not one complaint went to full mediation with most complaints being resolved informally. The service will be used in the future if necessary.

The Insurance Division's Flood Project Coordinator worked with private interest groups such as the Bar Association and Legal Services of Iowa in answering questions and directing parties to the correct source for assistance. The Insurance Division worked with National Flood Insurance Program personnel in obtaining help for people covered under the Program who were experiencing difficulty with the claims process. Division personnel met with federal officials following many complaints concerning the Federal Program and, in most cases, a suitable resolution was obtained.

The hotline and public service announcement brought immediate response from insureds. The division believes such immediate outreach following the flooding reduced the number of complaints and calls. This service will be used in the future if necessary. The division commends the insurance industry

for its cooperation and assistance in helping Iowa's insured during the flooding. Their efforts, no doubt, reduced the number complaints received by the division.

V. PROBLEMS/ISSUES

The Insurance Division believes that the National Flood Insurance Program must be more "user friendly" toward policy owners. The majority of complaints received by the division involved the federal program and the policy owners lack of knowledge as to flood insurance. Upon meeting with members of the program, suggestions were made to make the policy more understandable. It has been suggested that at the time of flooding, at a minimum, more information should be presented to the policy owner as to the steps in filing a claim and the policy owner's rights under the policy and steps to be taken should the policy owner disagree with the amount of the claim received. Additionally, the federal program should provide experienced personnel to staff information and complaint lines within the state immediately upon the onset of a flood disaster.

The Insurance Division does not have jurisdiction over the National Flood Insurance Program. However, the division was asked for assistance in regards to the federal program. The division found that many people were unaware that flood insurance was available. Only a very small percentage of those eligible to purchase flood insurance did so. National Flood Program personnel must do a better job of marketing the product. This can be done with the help of both the private insurance industry and government. Notices can be sent to local officials of counties and cities eligible to be part of the program alerting them to the availability of flood insurance.

The division believes that the National Flood Insurance Program personnel were ill equipped for a disaster on this magnitude and, therefore, were understaffed. Delays occurred due in part to the change in administrators following the flooding. Because the claims adjusters did not live in the region, people could not easily contact the adjusters to ask questions and more easily file claims and receive updates on their claims. In working with the Flood Recovery Coordination Team and federal officials, we believe that work can be done to make the program more accessible to the public, both at the time of purchase of the policy and when flooding occurs.

IOWA DEPARTMENT OF CORRECTIONS

FLOOD DISASTER AFTER ACTION REPORT

I. AREAS OF RESPONSIBILITY

The Department of Corrections is responsible for community based corrections and the prison system within the State of Iowa.

II. ORGANIZATION DURING EMERGENCY OPERATIONS

The Department maintained normal organization behavior during the flood crisis.

III. SUMMARY OF EMERGENCY OPERATIONS

Mitchellville

- * Received approximately 200 Polk County Jail inmates on 7/11. The county prisoner count has changed frequently during their stay. Approximately 20 female county prisoners were housed at the visiting room. Males were kept in the new Violator Facility.
- * Polk County provided its own security for its prisoners. Also provided food and other supplies. Mitchellville shared its phones, copier, fax and other office resources.
- * Some community concerns about safety and costs were initially expressed but were alleviated. Polk County Sheriff maintained a very high visibility and presence in the community.
- * Mitchellville city water supply was threatened by the flood. City officials were unable to obtain adequate supply of sandbags until DOC intervened with disaster officials.
- * Major maintenance and repair on the administration building was delayed by the crisis. This may mean the loss of funds for this project if not completed on schedule.

Newton

- * Stand down from emergency status at 3:00 p.m. on 7/14.
- * One of the institution's two wells was safe from the floods, as was their reservoir. A backup pump was obtained and adequate levels in the reservoir were maintained.
- * Inmate crews were not used by area communities. Were used on 7/14 to move computers in a Des Moines office, but not called on for flood work. Staff contacted Jasper County Disaster Services about availability for work. Staff was willing to take crews where needed within a 50 mile radius.

Fort Madison

- * Flood threat to the institution decreased as water receded. No problems occurred with water or power.

- * A bridge closing hampered staff's ability to get to work from the Illinois side. A trolley was used to transport staff from a pickup at Hamilton, Illinois to Keokuk where vans were used for transport to the institution.

- * Many inmate crews helped with area flood control.

Anamosa

- * The institution was not threatened by flood and operated normally.

- * Between 4,000 and 5,000 sandbags were filled at the institution. Inmate crews sandbagged at the local water plant.

- * Luster Heights crews worked on flood control and clean up in their area.

Oakdale

- * Flooding did not directly impact this facility but many area roads were closed.

- * Housed 38 Polk County inmates. All were housed on one of the regular units. These inmates were fed on the unit. Polk County provided some security.

Mt Pleasant

- * Not threatened by flooding, but heavy rains damaged a number of roofs on the campus. Rain damage was critical and compromised parts of the fire alarm system.

- * Inmate work crews were used extensively in the Burlington area to fight flooding.

Rockwell City and Clarinda

- * No serious flood or related problems reported by these institutions. Work crews not needed in these areas.

Community Corrections

5th District (Des Moines)

- * Fort Des Moines residential facility and the Work Release facility had power but no water. Neither were physically threatened by the flooding. Approximately 140 facility residents were furloughed. Residential staff worked with regular supervision staff on home visits and supervision of furloughed clients. Some problems developed because of disruption of courts.

2nd District (Ames)

- * Facility not threatened but many staff had trouble getting to and from work.

7th District (Davenport)

- * Flooding did not reach residential facility.

8th District (Ottumwa)

- * Flooding did not reach residential facility.

1st District (Waterloo/Dubuque)

- * Heavy rains caused some flooding of the Dubuque facility.

3rd District (Sioux City), 4th District (Council Bluffs), 6th District (Cedar Rapids)

- * No reported problems

IV. AREAS OF EXCELLENCE: See previous summary

V. PROBLEMS/ISSUES: None

IOWA DEPARTMENT OF CULTURAL AFFAIRS

FLOOD DISASTER AFTER ACTION REPORT

I. AREAS OF RESPONSIBILITY

The Department of Cultural Affairs is responsible for developing the state's interest in the areas of the arts, history, libraries, and other cultural matters for Iowans and visitors.

II. ORGANIZATION DURING EMERGENCY OPERATIONS: Normal

III. SUMMARY OF EMERGENCY OPERATIONS

A. DISASTER RESPONSE PHASE: None

B. DISASTER RECOVERY PHASE

In response to widespread flooding and damage to the state's historic properties and sites, art galleries, museums, and other cultural facilities in Iowa, the Department of Cultural Affairs (DCA) sought and received \$27,865 in federal funds from the Chairman's Emergency Grants Program of the National Endowment for the Humanities (NEH). These funds enabled the department to establish and staff the Cultural Resources Emergency Attack Team (CREAT), with the mission of identifying damaged or threatened cultural resources in Iowa, and to assist them in recovery from the flood and its after effects.

Professional consultants from around the country joined DCA staff in a damage assessment tour of the most flood-affected counties in Iowa. Once there, professional conservators gave valuable advice and consultation to local curators and private citizens on approved procedures for removal of molds, water stains, and high humidity levels affecting historic collections, and drainage, roofing, landscaping, and other structural concerns relating to historic structures and archaeological sites. Free evening seminars on artifact conservation and structural stabilization and renovation were also provided in seven Iowa cities. A special toll-free information line was established to the Historical Building in Des Moines so that our constituents who had suffered the effects of the flood could reach our staff promptly and without cost.

Follow up contacts were made with these cultural resources in an effort to provide ongoing consultation, and to assist these entities with the requirements needed to receive federal financial assistance. The department, in cooperation with the Iowa Cooperative Preservation Consortium (ICPC) of Iowa City, utilized remaining grant funds for the printing and mailing of the Flood Recovery Booklet, a 70-page document which outlines proper procedures for dealing with collections, and even personal belongings, damaged by flooding or its after effects.

Over 2000 of these booklets were mailed across Iowa, including copies to all of Iowa's libraries, both public and private, all county disaster officials and elected officials, to all museums, galleries, and historical societies, and to a host of others. The booklet was so well-received, a second printing was ordered to meet the demand. The department received requests for additional copies from across the nation, and a supply was sent to California upon their request to help deal with the aftermath of the recent Los Angeles earthquakes.

The remaining grant funds from the NEH were utilized to establish a flood recovery depot at the Historical Building in Des Moines. There, flood relief supplies for cultural organizations were stockpiled for delivery to areas damaged by future widespread flooding or localized disasters. Crucial, specialized, and often readily unavailable materials are available and can be tailored to the specific needs of constituents based upon types of historic and cultural materials damaged.

The department's arts division, the Iowa Arts Council, sought and received a grant of \$32,800 from the National Endowment of the Arts (NEA) through its Underserved Program. These funds were regranted to artists and arts organizations for flood relief and recovery. A second component of the grant awards was in recognition of the value of the arts as therapy to persons suffering from the ravages of flooding. The use of the arts is seen by many to have a calming effect on persons who may feel that they are not in control of their lives due to the forces of nature. In this regard, grants were awarded to artists to provide stress-reducing creative seminars, to drama troupes for interpretive productions related to the floods, and to arts organizations for the creation of specific works and exhibits. Additional funds helped art galleries purchase such needed equipment as dehumidifiers for collections conservation.

The department's historical division, the State Historical Society of Iowa (SHSI), aside from its role in the CREAT team effort mentioned above, adopted an aggressive stance in the search for and administration of federal disaster assistance funds. A total of \$910,000 was received from federal agencies for historic preservation projects. A sum of \$835,000 was made available in two installments from the National Park Service (NPS) while \$75,000 was forthcoming from the National Trust for Historic Preservation. Thirty-two grants were awarded based upon a strict flood recovery and stabilization criteria. Eligible structures included those either listed on or eligible for the National Register of Historic Places. The majority of the funds went for structural stabilization of historic properties while other funds helped restore adequate environments and HVAC systems for structural and collections conservation.

Additionally, the Historic Resource Development Program (HRDP), a state grant program administered by the SHSI, prioritized its 1994 awards to go to flood-damaged historic properties. Over \$114,000 in non-disaster funds were reallocated and subsequently awarded to help preserve Iowa's cultural landmarks.

IV. AREAS OF EXCELLENCE: See above summary.

V. PROBLEMS/ISSUES: None

IOWA DEPARTMENT OF ECONOMIC DEVELOPMENT

FLOOD DISASTER AFTER ACTION REPORT

I. AREAS OF RESPONSIBILITY

The department's mission is to enhance the economic development of Iowa and provide job creation and increased prosperity and opportunities for its citizens. It provides direct financial and technical assistance and training, and coordinates other economic development programs from the local, community, and federal levels. During the floods, the department analyzed and provided data on the:

- A. Isolation of businesses from public use.
- B. Extent of disruption in business services or closings.
- C. Business damage estimates.
- D. Extent of insurance coverage for businesses.
- E. Financial hardships of businesses.
- F. Number of employees out of work.
- G. Loss or damage to business facilities or inventories and their importance to the area.
- H. Extent of lost tourism business.
- I. Loss and damage to community facilities and housing units occupied by low and moderate income persons.
- J. Feasibility of foreign firms establishing or expanding their business in Iowa.

II. ORGANIZATION DURING EMERGENCY OPERATIONS

The Communications and Technology Services Bureau delivered a variety of services during the disaster. At the height of the flooding, the bureau provided organizational and staff support to the State Emergency Operations Center.

The Bureau of Community Financing developed ten "Housing Recovery Zones" throughout the state to efficiently distribute Community Development Block Grant (CDBG) and HOME flood recovery funds. These zones were created by utilizing the existing regions served by the Councils of Governments (COG's).

The State Economist functioned with the Department of Economic Development's (IDED) Research and Small Business personnel, with staff assistance from the Department of Employment

Services (DES), Des Moines Chamber of Commerce, and Department of Management.

The Small Business Administration set up a Disaster Application Center in the IDED office building.

III. SUMMARY OF EMERGENCY OPERATIONS:

A. DISASTER RESPONSE PHASE

The Communications and Technology Services Bureau staff wrote press releases, fielded phone calls from the media and government officials, conducted interviews, gathered and checked information for accuracy, and conducted media interviews. The bureau assisted in the production of public service announcements to inform flood victims of assistance available. Later, the bureau wrote news releases concerning federal funding available to flood-stricken communities.

B. DISASTER RECOVERY PHASE

1. Work Force Development.

a. Iowa Conservation Corps Activities.

Two days after the flooding hit the Des Moines area in July, Norwest Bank Iowa contacted the Office of the Governor and offered to pay for 300 youth to work for two to three weeks to assist with flood clean-up activities. After initial discussions with Norwest, the department contacted the Commission on National and Community Service to see if the Norwest money could be matched with a federal grant. On July 19, the department received a \$250,000 grant from the Commission matched with \$120,000 from Norwest Bank Iowa. The money allowed expansion of the Iowa Conservation Corps by 387 young people. These workers provided over 41,720.5 hours of flood relief services and clean-up efforts in the Des Moines, Davenport, and Ottumwa areas.

The young people performed work for the state (3%), counties (33%), municipalities (41%), public schools (5%), private, low income homes (10%), and other agencies (American Red Cross, Salvation Army)(8%). They performed the following tasks:

- * Removed debris and mud, cleaned/painted facilities, and cleared public areas, downtown districts, state and local parks, and public streets.

- * Prepared a facility for a shelter house, including painting.

- * Removed sandbags from 70 blocks in West Des Moines. Removed 15,000 sandbags in the Davenport area.

- * Cleared debris and mud, cleaned, performed demolition work, and painted in 53 low income homes and 4 schools.

- * Reseeded and laid new sod in washed out areas. Replanted flower beds.

- * Distributed 3,609,760 gallons of water to Des Moines residents.

- * Delivered 300,000 gallons of water to nursing homes, day care centers, schools, and shutins.
- * Distributed personal items, bedding, clothing, and food to an estimated 800 families.
- * Prepared and served 75,000 hot and cold meals and assisted in clean-up, inventory and packing 60,000 pounds of food items shipped to other flood areas.
- * Assisted in restoring 1.5 miles of railroad tracks and right of way in downtown West Des Moines.
- * Provided 300 families with 10,000 food pantry items.
- * Helped process flood relief claims.
- * Provided 93 hours of day care for a PTA-sponsored day care center.

Another application has been approved by the Commission on National and Community Service for an additional \$400,000 to assist with DNR trail reconstruction at state parks, the 4-H Camping Center and to hire 10 VISTA volunteers to develop flood clean-up projects for young volunteers and youth service groups. Part of this effort will also be helping coordinate college students from around the country that wish to come to Iowa and assist with clean-up efforts.

b. Emergency Dislocated Worker Grant - JPTA

The Division of Workforce Development applied to the US Department of Labor for JPTA Title III dislocated worker funds and received a \$15 million Emergency Dislocated Worker Grant. The purpose of the grant is to place the workers dislocated due to the devastation caused by the flooding, long-term unemployed individuals, and other dislocated workers in temporary emergency public jobs to assist in the cleanup, repair and reconstruction of public and private non-profit property in floodstricken areas. This emergency public jobs activity is restricted to work directly related to flood disaster and is to be concentrated in those areas experiencing the most severe public sector damage.

The Emergency Dislocated Worker Grant funds have been distributed via contracts to the 16 JPTA Service Delivery Areas where the JPTA staff develop worksites and provide intake and eligibility determination. The Division of Workforce Development entered into a contract with the Labor Institute for Workforce Development to help with outreach efforts and worksite development in the southeastern quadrant of the state where most of the damage took place. In addition, three monitors were hired to monitor the worksites and review the participant records.

The 16 JPTA Service Delivery Areas have fully obligated the \$15 million available from the original grant. A request for an additional \$10 million has been submitted to the US Department of Labor along with a request to extend the time period of the grant to December 31, 1994.

Through the end of March 1994, 1659 individuals have been placed in emergency temporary public jobs doing a wide range of flood-related activities. Currently, 907 participants are employed with the Emergency Dislocated Worker Grant funds. Following is a list of types of work that has been and continues to be accomplished with the Emergency Dislocated Worker Grant funds:

- * Removing debris, brush, and trees
- * Property damage assessments
- * Restoration of non-profit private property
- * Removing and reconstructing collapsed retaining walls
- * Washing, sanitizing, and painting flood-damaged surfaces
- * Checking and restoring flood-damaged information files
- * Measuring grain bins and land for the purpose of determining yield losses for ASCS disaster assistance program
- * Arranging, publicizing, and presenting workshops regarding flood recovery
- * Processing disaster claims
- * Repairing water meters
- * Clean-up and repair of sewer systems
- * Rebuilding trails and footbridges
- * Cleaning and restoring swimming pools
- * Street, culvert, shoulder, and bridge repair
- * Helping clients with disaster applications
- * Setting up warehouses and offices for flood relief supplies
- * Delivering supplies to flood relief recipients
- * Assisting in the repair and inspecting of electrical, painting, sheet metal, plumbing, carpentry, and insulation projects
- * Providing general clerical assistance directly related to the disaster response
- * Replanting and reseeding

2. Business Finance Activities.

IDED identified a need for grants or delayed payback loans to assist businesses affected by flooding. Small Business Administration loans, while helpful in the long run, did not provide the immediate

relief needed by some impacted businesses. Also, it was felt that a number of key businesses could have used grants in order to qualify for, or leverage other loans.

Using 1993 regular CDBG and supplemental CDBG flood recovery funds, IDED established a program to assist businesses whose closure would cause undue hardship to a community. Companies in basic industries like manufacturing were eligible for up to \$100,000; while essential retail and service business in communities under 5,000 were eligible for up to \$25,000.

A total of six applications were received for this program. Should severe flooding occur in 1994, consideration should be given to reactivating this program.

3. Marketing.

The Bureau of Marketing and Business Expansion responded to the flood with a variety of programs which communicated to our business prospects that Iowa was "open for business." A previously scheduled business recruiting trip to Los Angeles proceeded as scheduled and incorporated a special press conference for the Governor to extol the advantages of doing business in Iowa. Free ads were utilized in Inc. Magazine and Site Selection Handbook. A direct mail campaign aimed at key prospects was created reminding them of Iowa's many attributes. Public relations efforts were aggressively pursued: 1) four editions of the "Iowa Beats" newsletter were distributed to the national press and 2) a special edition of the Businessphere newsletter was distributed to former Iowa residents.

4. Iowa Tourism.

The impact of summer flooding on tourism in Iowa was severe. Visitation rates were down 33.9 percent during July, down 30.4 percent during August, and down 19.9 percent during September. Some businesses closed early during the season and some never opened. Lodging establishments and private campgrounds saw sharp decreases in business for the entire summer. An inaccurate perception that all of Iowa was "closed" due to extensive national media coverage of the flood caused many travelers to avoid Iowa. Even AAA was telling people not to drive through Iowa. In reality, only a few tourism attractions were closed at any given time during the summer. But even in the fall, people still stayed away because of misconceptions.

Several initiatives were taken by the department. A toll-free hotline was established in July to give travelers accurate information about which attractions and events were closed, relocated or still open. Over 15,000 calls were received on the hotline. The Division of Tourism hopes to keep this line open indefinitely to inform travelers of future events and attractions. Money for this project was taken from other division programs. Radio and printed advertising were placed in Iowa and major Midwest markets during August and September to dispel the myth that Iowa was "closed for business" and to encourage travel in Iowa for late summer and fall. A portion of the budget earmarked for spring advertising was used for last fall's campaign, and cannot be recouped without federal assistance. In cooperation with the Iowa Convention and Visitors Bureau Association, the division conducted a special promotion at the Iowa State Fair and at several trade shows in August and September, stressing that "Iowa is open for business." Larger cities which depended on filling hotel rooms and booking conventions were hit particularly hard because of the decrease in the number of nights reserved and cancellations of reservations. It was extremely important for them to get the word out about Iowa's situation.

Marketing dollars are needed to replace the division's depleted fund and supplement advertising efforts for 1994. With its remaining budget, the division is able to do only a very small amount of marketing, when in reality, it is more important than ever to increase interest to out-of-state travelers and encourage them to visit Iowa in 1994. Immediate action on federal requests for supplemental tourism advertising is needed due to the short timeframe for planning and executing spring promotion and advertising campaigns. If poor weather and flooding problems occur in 1994, there will be a need counteract negative publicity with positive messages about Iowa.

5. International Business Activities.

The Governor led a delegation of state and local officials and developers to Europe and Asia to hold discussions with potential investors about the advantages and business opportunities in Iowa. Visits were targeted to ongoing projects initiated prior to the flooding to address concerns over the viability of locating in Iowa.

6. State Economist Activities.

Chambers of Commerce were surveyed for extent of business losses and worker displacement. Follow-ups were conducted with affected businesses to determine specific damage impacts. Information and analysis were shared with emergency business groups (SBA, Small Business Development Centers) and state budget planners.

7. Community and Rural Development Activities.

Since the flooding, the US Department of Housing and Urban Development (HUD) has allocated approximately \$38.7 million to Iowa in flood appropriations. Almost \$10 million of the funding was made available through the HOME program. The remaining \$28.7 million was made available through the Community Development Block Grant (CDBG) program. The Bureau of Community Financing (BCF), a component of the Division of Community and Rural Development, is responsible for administering the \$38.7 million in HUD funds allocated to the state. In addition, HUD allocated approximately \$15.8 million in flood appropriations directly to eight "entitlement" cities in the state. The primary objective for the use of HUD flood funds was to repair, restore, and replace facilities damaged by the floods of 1993.

Repair and Restore

The CDBG funds were targeted to address the need to repair and restore flood damaged housing. This includes the rehabilitation of housing, the elevation of housing, and the acquisition, relocation of occupants, and demolition of housing that is too severely damaged to be repaired. In order to address this need as quickly as possible, the BCF created ten "Housing Recovery Zones" by combining several counties together to form each zone. Each zone has a "lead" county that receives the CDBG funds and disburses them to the other counties in the zone. The BCF utilized the existing Councils of Governments (COGs) in each zone to administer these funds. The COGs were chosen for this purpose because of their technical expertise in housing rehabilitation and CDBG grant administration, as well as their familiarity with local governments in their respective region. By creating the "Housing Recovery Zones" the BCF is using a cooperative approach to provide expeditious housing recovery assistance.

Replace

The HOME funds were targeted to address the replacement of lost housing stock due to the floods of 1993. The three primary objectives of the replacement housing program are to replace the housing stock destroyed by the floods of 1993, to provide replacement housing that is affordable to low/moderate income households, and to provide replacement housing that would be attainable to flood victims. A simplified application form for the HOME funds is currently available.

Other Flood Recovery Efforts

Although housing recovery assistance has been the primary focus of the BCF's flood recovery efforts, the bureau has also used CDBG funds to finance other unmet recovery needs. Examples of these uses include: the repair of several flood damaged levees, the financing of several community based housing "buy-out" programs, and providing the 25 percent local match for FEMA 404 Hazard Mitigation Housing Projects. The BCF's flexible use of CDBG funds has allowed these funds to be a valuable resource in an assortment of flood recovery projects.

IV. AREAS OF EXCELLENCE

A. The innovative creation of "Housing Recovery Zones" to quickly and effectively repair and restore flood damaged housing as well as assess housing flood damage has streamlined the recovery process, and has provided an equitable allocation of funds throughout the state.

B. The reservation of HOME funds to finance housing initiatives for the replacement of housing stock that was lost due to the floods of 1993 was very beneficial. It was determined by the BCF that funds from the HOME program would be more suitable for new construction than for repair and restoration. This decision has assured the availability of funds for the construction of replacement housing in the state.

C. The flexible use of CDBG funds to address a wide spectrum of unmet flood recovery needs was very helpful. The ability and willingness of the BCF to use CDBG funds for a variety of flood recovery projects has expedited the flood recovery effort in many areas. Many important projects would have been delayed or cancelled for lack of funds had CDBG funds not been utilized.

D. Surveys to identify business losses and worker displacement was a cooperative effort through the Chambers of Commerce. Over 97 percent of the surveys were returned.

E. The quick response time of Norwest Bank Iowa and the Commission of National and Community Service in providing funds to augment the flood clean-up effort, greatly enhanced this evolution during a time when volunteer labor was becoming scarce.

V. PROBLEMS/ISSUES

A. Primary problem was the lack of quick and sufficient funding for business recovery.

B. A system for coordinating the initial damage assessments was not in place. Recommend a data system fed by FEMA, Red Cross, and designated state/federal agencies.

C. A perception exists that economic conditions and infrastructure have been detrimentally harmed for the long term. Work will continue to put the situation in perspective with sound factual data reporting.

D. Federal funds should have been made available immediately to inform the public as to which tourism facilities were closed. This action would have avoided mass cancellations of reservations and planned visits to attractions not impacted by the disaster.

E. Application for the second round of funding for the Norwest Youth Task Force was slow and cumbersome.

IOWA DEPARTMENT OF EDUCATION

FLOOD DISASTER AFTER ACTION REPORT

I. AREAS OF RESPONSIBILITY

The staff of the Iowa Department of Education were involved in two different phases with respect to the flood recovery coordination: 1) local level assessment, and 2) local level assistance.

II. ORGANIZATION DURING EMERGENCY OPERATIONS: Same

III. SUMMARY OF EMERGENCY OPERATIONS

The first major activity undertaken by the Department of Education was the assessment of flood damage to school districts, area education agencies (AEAs), and community colleges. A staff member in the department was assigned as the point of contact for all flood related local education agencies issues. Staff was assigned the responsibility of conducting a survey of damage to local schools, AEAs, and community colleges. An initial written assessment was conducted with the assistance of the Iowa Association of School Boards. A second assessment was conducted to ascertain a better cost estimate of damages and to gain more information on the types of damage incurred. Included in the second assessment was an inquiry when FEMA had been contacted, an assessment of long-term impact of the district, i.e. increased transportation costs, and inquiries to ascertain if asbestos was present in any of the facilities damaged by the flood. A direct contact was made to all districts which had flood damage but had not been in contact with FEMA.

The second activity in which department staff have been involved has been to provide state level support to the project "Outreach Iowa." This project which is being coordinated at the University of Iowa School of Social Work is providing training for school personnel to help identify children under stress and to provide training to enable staff to help these children. The Department of Education has promoted this effort and continues to provide support, advice, and coordination. A staff member of the department has been serving as our point of contact and has represented the department in some of the planning associated with "Outreach Iowa."

IV. AREAS OF EXCELLENCE

To enable us to survey all local school districts quickly, we asked for assistance from the Iowa Association of School Boards. Through the use of their fax system, we were able to quickly survey the extent of damage and help districts seek help and encourage them to contact their county FEMA coordinator. Having a single point of contact within the Department of Education also enabled districts to receive accurate and timely information. We believe we provided excellent support and communication to districts and were able to answer questions regarding the impact the flood had on districts. We were also able to alert districts to keep records throughout this year on areas such as increased transportation costs. These increased costs may be eligible for federal reimbursement.

V. PROBLEMS/ISSUES

The most significant problem was the slow federal response to the University of Iowa's proposal from the School of Social Work to provide training to school personnel to help them identify and provide help to children in need of assistance. The workshops are in place and will occur between January and March, 1994. These workshops should have been set up prior to school starting or early in the school year.

IOWA DEPARTMENT OF ELDER AFFAIRS

FLOOD DISASTER AFTER ACTION REPORT

I. AREAS OF RESPONSIBILITY

Primary mission is to assist 13 designated area agencies on aging conduct outreach and advocacy services for older Iowans so that disruption and unreimbursed losses for elders are minimized. Primary assistance to area agencies is the provision of communication and financial resources.

II. ORGANIZATION DURING EMERGENCY OPERATIONS

Emergency operations required no structural changes in the organization of the aging network. The Department of Elder Affairs designates funds and provides broad policy guidelines and communication to 13 private, not-for profit area agencies on aging covering all 99 Iowa counties. All area agencies provide outreach, information, assistance and advocacy services on an ongoing basis. The timing and scope of these services were sharply intensified during this statewide disaster.

III. SUMMARY OF EMERGENCY OPERATIONS

A. DISASTER RESPONSE PHASE

Department of Elder Affairs

The Department provided around the clock coverage in the State Emergency Operations Center. Tasks included:

- * Communication with area agencies about Disaster Application Center schedules, declaration of counties, emergency shelter and feeding sites, elder services facility damage and assessments of unmet needs;
- * Communication with all Des Moines area nursing facilities immediately prior to and after loss of the water system;
- * Communication with Red Cross and US Department of Agriculture regarding feeding needs and resources;
- * Application for federal financial resources to assist area agencies accomplish their mission.

Area Agencies on Aging

Area agencies immediately provided the following services:

- * Opened senior centers and meal sites for emergency shelter and feeding for people of all ages;

- * Contacted elders to determine needs and provide assistance;
- * Staffed Disaster Application Centers;
- * Expanded home delivered meals, transportation, home clean up and chore services;
- * Delivered water for drinking and toilet flushing in Des Moines area.

B. DISASTER RECOVERY PHASE

Department of Elder Affairs

The Department provided the following assistance for the aging network recovery mission:

- * Assisted communication between disaster recovery agencies and area agencies regarding individual benefit programs, eligibility requirements and restrictions;
- * Obtained and immediately disbursed to area agencies, three federal grants in the amount of \$1,076,812 for elder outreach, advocacy and gap filling services;
- * Obtained and immediately distributed to area agencies, monthly lists of all elderly FEMA applicants for follow up about unmet needs;
- * Assisted communications between area agency recovery advocates and various recovery agencies on individual case resolution;
- * Assisted elder service providers apply for FEMA Public Assistance program to reopen damaged facilities.
- * Met weekly with the Health/Human Services Recovery Team (Elder Affairs, Human Services, Public Health, Division of Community Action Agencies and Iowa National Guard) to plan actions for outreach, migrant worker issues and the provision of resources to local agencies assisting targeted populations with flood recovery.

Area Agencies on Aging

Area agencies assisted older Iowans recover from this disaster in the following ways:

- * Located elders with flood losses who had not applied for recovery assistance by marketing and one-on-one contacts;
- * Helped elders understand the application processes for multiple recovery benefits;
- * Coordinated with other disaster recovery agencies;
- * Advocated for the older population and individual elders;

* Identified gaps in recovery services and developed resources to fill those gaps;

* In some communities the area agency brought human service agencies together to plan for and avoid duplication of services.

IV. AREAS OF EXCELLENCE

A. Communication

Response phase communication among the Iowa Emergency Management Division, Department of Elder Affairs, U.S. Administration on Aging and the area agencies on aging was timely and effective. The key elements for this success were the decision to activate the State Emergency Operations Center for extended hours and the level of trust among federal, state and area staff in the aging network. Recovery phase communication among the Iowa Flood Recovery Team, Health/Human Services Recovery Team, Iowa National Guard, Department of Elder Affairs, U.S. Administration on Aging and area agencies has been helpful for completion of the recovery mission.

B. Coordination

Coordination among state departments and among local agencies produced positive results. Coordination problems were quickly resolved when identified. Weekly meetings of the Health/Human Services Recovery Team greatly assisted coordination and problem resolution.

V. PROBLEMS/ISSUES

A. Communication

1. Response phase communication regarding utilization of aging network resources for emergency feeding by the lack of decision making authority delegated to assigned representatives of the U.S. Department of Agriculture and Red Cross.

Recommendations for Improvement: Encourage organizations represented at the State EOC to either delegate adequate authority for action or arrange for immediate access to staff with such authority.

2. Communication of response and recovery between the Department of Elder Affairs, area agencies on aging, and other agencies was delayed because there were not direct computer linkages between these organizations.

Recommendations for Improvement: Encourage the application of current technology for communication of data.

B. Financial Resources

1. Federal, state, and local representatives in this disaster have almost universally acknowledged that thousands of vulnerable older Iowans would not receive equitable access to federal disaster entitlement assistance without substantial investment in outreach and advocacy services. Despite this agreement, and with the exception of an early infusion of Administration on Aging resources of five percent

of the identified need, federal support was delayed for months.

Recommendations for Improvement: Anticipate the needs of underserved populations in major disasters by including funding authority for agencies serving such populations either in FEMA appropriations or in other federal agency appropriations.

2. Federal financial resources did not always fit the needs of Iowa response and recovery. There were financial shortages at the same time there were unused funds. Millions of dollars of US Department of Labor Dislocated Worker Program funds were unable to be utilized due to a disparity between recovery needs and program requirements.

Recommendations for Improvement: Establish more flexibility in federally funded programs. Flexibility could either be built into the programs or authority for waivers of program requirements could be added to existing programs.

3. Some application procedures for federal funds were unclear and cumbersome. The US Department of Health and Human Services (HHS) required the Department of Elder Affairs applications to be rejected by FEMA twice before being considered by HHS for recommendation to OMB, which in turn made recommendations to the President for Congressional approval of funds that Congress had already appropriated. This process delayed aid to older Iowans by months and placed additional administrative burdens on FEMA.

Recommendations for Improvement: Establish clear procedures for timely access to federal financial assistance.

IOWA DEPARTMENT OF EMPLOYMENT SERVICES

FLOOD DISASTER AFTER ACTION REPORT

I. AREAS OF RESPONSIBILITY

Maintain employment security and workplace safety services. Implement Disaster Unemployment Insurance Program. Provide specialized service to employers, workers, the general public and public officials impacted by the flooding.

II. ORGANIZATION DURING EMERGENCY OPERATIONS

Held daily flood impact update meetings. Daily meetings with Governor's Office and department heads. Posted information for staff.

Worked with Emergency Management Division and DES staff including three information specialists detailed to work in EMD. Contacted employers/businesses for water distribution sites.

Job Insurance Bureau formed a Disaster Unemployment Assistance (DUA) unit, made up of nine temporary assignments to process DUA claims. JI tax personnel moved out of temporary quarters due to flooding and worked out of their homes or were stationed in the administrative office. Other staff located in local offices that were flooded worked out of their homes or traveled to another office.

Three local offices were evacuated and temporary headquarters were obtained and occupied within 24 hours.

III. SUMMARY OF EMERGENCY OPERATIONS

A. DISASTER RESPONSE PHASE

Identified essential services, contacted key staff to formulate plans.

Workers' Compensation operations continued as normal. Requests for continuance granted in instances where attorneys were unable to get to their offices.

Maintained Job Insurance tax operations availability to employers. Assisted affected employers reconstruct records and responded to employer's general needs.

Some Job Insurance appeal hearings in Des Moines were postponed until suitable space was acquired. By the second week of the flood, alternative hearing sites were found and the parties notified.

Disaster unemployment unit was established and DUA claims were taken at Disaster Application Centers and local offices. Several media releases were made to insure affected workers knew of program.

Available working conditions were modified. The claims section provided areas for the Des

Moines local staff to conduct factfinding and take initial claims by phone.

Bureau of Staff Services developed a computerized method to determine volume of claimants by week who filed during flood period.

Staff services information specialists worked 12-hour days and weekends disseminating flood information and handling media inquiries.

ADES employer hotline was set up to assist firms affected by severe flood damage to recruit clean-up workers.

Bureau of Staff Services and Kansas City Bureau of Labor Statistics staff telephoned over 1,100 employers to urge them to provide monthly employment and payroll data as soon as possible.

Information and analysis of flood impact on Iowa economy and employment provided to various officials and organizations.

B. DISASTER RECOVERY PHASE

DUA claims taken and processed. Des Moines local office in temporary quarters.

IV. AREAS OF EXCELLENCE

Staff responded positively throughout disaster. Evacuated, moved, operated in less than 24 hours in several locations. Virtually no interruption in service.

Division of Labor developed a safety and health checklist for employers in conjunction with the Association of Business and Industry. This information provided at no charge gave a list of hazards to be aware of when sending employees back in after the business had been flooded. Alerted the public of the need to verify contractor registration.

Businesses which were flooded were given priority when requesting on-site consultation visits. This service was free of charge. Additional emergency staff was added on a temporary basis.

The State of Texas assisted in supplying the agency with software to help in the processing of DUA. Colorado and Nebraska provided staff to assist with claims.

V. PROBLEMS/ISSUES

A. Although DES handled the emergency exceptionally well, DES was not prepared for such an emergency. A disaster recovery plan is underway. This plan needs to address:

DES Disaster Team appointed with identified liaison for state and community with responsibility statements. Up front plans for evacuation by bureau.

Staff - People available with physical capability to lift and relocate computer/electronic equipment to safe locations.

Transportation - Readily accessible trucks with enclosed covers and lift gates to relocate equipment to safe areas.

Warehousing - Adequate space to use on a temporary basis to store equipment in safe, dry conditions until it is acceptable to place back in service.

Communications plan for phones and other equipment.

Alternate locations available to house staff.

Additional staff to meet disaster needs.

B. Need to build into Job Insurance system an identifier of applicants affected by disaster.

C. Disaster Unemployment Assistance Program

The formula for calculating the weekly benefit amount for self-employed individuals is grossly unfair. Regular unemployment insurance is based on gross earnings of worker while under DUA, self-employed assistance is based on net earnings.

US Department of Labor policies for payments to the self-employed are prejudicial to farmers and bears no reasonable relationship to modern agriculture.

The five-step calculation for unemployed worker DUA weekly benefit amounts is a bureaucratic nightmare, impossible to explain to trained staff or the general public.

The federal DUA manual and forms have not been updated since 1977 and are completely out of date.

The process for funding applications to pay DUA claims needs to be simplified to prevent delays in paying claims.

The US Department of Labor should consider forming a strike team of at least five DOL employees who would go to a state (or states) when a disaster strikes to provide assistance.

Biannual national meetings of state DUA coordinators would provide a forum for developing national strategies and an opportunity for developing DUA expertise.

D. State legislation on handling Job Insurance charges should be enacted for future disasters.

IOWA DEPARTMENT OF GENERAL SERVICES

FLOOD DISASTER AFTER ACTION REPORT

I. AREAS OF RESPONSIBILITY

The Department of General Services is responsible for maintaining the entire State Capitol Complex. Protective measures were taken to insure health and safety of all complex employees and visitors. It was a priority of the Governor to keep the State offices open and operating. This entailed a wide variety of services. The responsibility was magnified by the loss of water and limited electrical usage/availability. Another key area of responsibility was communications. There was a threat of the Des Moines River bridge washing out connecting the State Complex with US West. With the possibility of losing all telephones, a microwave was purchased and installed at the Lucas Building. The Department also maintains the Iowa Communications Network, the fiber-optic system, constructed throughout the state. The flood caused several wash-outs of the fiber-optic cable and required immediate repair to keep the Network operational.

II. ORGANIZATION DURING EMERGENCY OPERATIONS

Main areas will be categorized by divisions.

Communications - Kept the telephone complex system operational and the Iowa Communication Network fiber-optic system repaired as needed. Immediate and continuous responsibility installing emergency phones for the Emergency Management Division which were located in different areas of the Hoover Building. The Division's electronic and technical staff assisted in installing and moving equipment as needed or necessary due to possible flood water damage. The state helped Des Moines Water Works and the City of Des Moines with telephone access. The Communications telephone operators were responsible for setting up numerous conference calls between the Governor's staff and all Department Directors. The conference calls were very time consuming and could be streamlined with the purchase of special phones for speed conference calling.

Property Management - Maintained building operations on a daily basis. The Complex did not shut down during this emergency. Due to the loss of water, portable toilets had to be leased and necessary supplies had to be furnished for employee health, i.e. sanitary wipes for cleaning hands. Drinking water was supplied to all buildings. The Emergency Management Division is located in the Hoover Building, Level A. This area and B-level north-side, the mainframe computer area, have a standalone cooling system equipped with emergency generators. Also, the Emergency Management Division is equipped with a well and bathroom facilities, for this area alone was fully operational. All other areas on the Complex were maintained with minimal lighting, and no air conditioning, which is a water-chilled system. Due to the immediate loss of water over the weekend when the flood first became a reality, damage was caused to various pieces of equipment. Equipment repairs were made during the emergency and after normal operations were reinstated.

Information Services - Needed to maintain chiller operation and full electric power to the mainframe computer equipment. Assisted by our Property Management Division.

Printing - Had staff available to print material for Emergency Management as needed. Reproduction equipment had to be removed and reinstalled in one of our satellite printing areas located downtown due to flooding in the building.

Purchasing - Arranged leasing of portable toilets and emergency purchases were completed on an as-needed basis. Assisted not only General Services, but all state departments on flood-related purchasing. Made arrangements for food being supplied to Emergency Management.

Vehicle Dispatch - Had to move State Fleet cars as flood water threatened the facility.

All of the employees of General Services in every division, assisted key staff in keeping the State Complex operational. Some staff were present 24 hours daily during the disaster.

III. SUMMARY OF EMERGENCY OPERATIONS

A. DISASTER RESPONSE PHASE

The Department of General Services had to maintain and operate the Complex to full capability as much as the disaster would allow. No shutdown of the state facility was allowable. Staff responded immediately as the disaster was announced.

B. DISASTER RECOVERY PHASE

Health and safety were maintained at all times - number one concern. Emergency repairs were handled at the time, and permanent repairs were made as time allowed, or after the main thrust of the disaster. The state continued to repair damage to the Iowa Communications Network.

IV. AREAS OF EXCELLENCE

- * All General Services staff pulling together as a department.
- * Construction of 150 portable toilets in four hours.

V. PROBLEMS/ISSUES

General Services had never been put to the test on such a disaster of this magnitude or such a wide area of responsibility. We as a whole did not know the disaster process, or FEMA procedures. Emergency Management got disaster and public assistance information out, but due to the complexity of an entire state suffering the disaster at the same time, mis-communication occurred and uncertainty of what we, as a department, could do, or be allowed to complete, under FEMA regulations. Possible updates on the process to key personnel would be advantageous to improve knowledge for future disasters. Possibly, Emergency Management should involve more functional areas in their disaster readiness training sessions.

The department was unsure of which forms needed to be submitted to FEMA, and what was, or was not, an allowable expense.

IOWA DEPARTMENT OF HUMAN RIGHTS

FLOOD DISASTER AFTER ACTION REPORT

I. AREAS OF RESPONSIBILITY

The Division of Community Action Agencies exists to develop and expand the capacity at the community level to assist families and individuals to achieve economic and social self-sufficiency, and to ensure that the basic energy needs of Iowa's low income population are met. The nineteen Community Action Agencies (CAAs) in Iowa exist to develop solutions to poverty in communities throughout the state. A center is located in each of Iowa's 99 counties, where low income, elderly, and disabled families and individuals may seek assistance. The mission of the Commission on Latino Affairs is to improve the quality of life of all Iowans by increasing statewide understanding of the social, cultural and economic contributions Latinos make in Iowa. Additionally, our mission is to serve as a resource center which promotes positive change by assessing the issues and making recommendations to decision-makers of the challenges facing Iowa's Latino community. It is important to see that the areas we were most responsible for during the floods, were in networking and bridging with community, state and city agencies, i.e. Health Department, Red Cross, FEMA. We were instrumental in communicating issues regarding health warnings, financial aid, emergency shelters, water distribution sites, and in disseminating information to community organizations, becoming a command station for them when their area was put on evacuation alert. Crucial to all of our networking was the output of information in the Spanish language.

II. ORGANIZATION DURING EMERGENCY OPERATIONS

On August 2, Iowa's 19 CAAs were surveyed for the purpose of securing useful information about their roles during the month of July, 1993 in relation to Iowa's flooding and for their assessment of future needs. The CAAs addressed flood related problems of the poor through their pre-existing network of county centers.

The Commission on Latino Affairs responded by organizing a system of volunteers on an on-call basis for interpreting and translating written flood information from English to Spanish. We distributed lists of interpreters to many agencies including United Way, Red Cross, Health Department, Social Services, etc. We organized meetings with local citizens and community organizations and linked people to correct resources for their needs.

III. SUMMARY OF EMERGENCY OPERATIONS

A. DISASTER RESPONSE PHASE

To pay for flood-related services, agencies increased their July, 1993 CSBG budgets by as much as 40 percent, and over \$3 million in private sector money was received. Comparing the CAA's July '93 activities to their July '92 activities reveals a substantial increase in activity, reflecting a significant response to flood-impacted households.

Advocating for Migrant Workers - Searching for funds for migrant workers who were displaced workers.

Networking with Proteus - \$10 thousand given by Salvation Army for migrant workers to return to their homes of origin.

Raising public awareness about problems encountered by Latinos who do not speak English or who have minimal aptitude in English.

Increasing the network alert in community organizations who were not responding with urgency to the situation.

Soliciting response from mass media. Public information messages began to go out in Spanish, and this changed the tide for the Hispanic population who were not being reached.

Networking with out of state agencies - i.e. Florida, Hurricane Andrew experiences, and California, earthquake areas. What solutions worked for them and what methods would be better for us here.

In summary, the greatest area of excellence was in avoiding and averting serious health problems because we were able to communicate to the people in two languages. Without Spanish language being used to reach a large segment of the population, we could readily see how we could have had many sick babies and children who would have been drinking contaminated water. The response from the Health Department, United Way, and Red Cross was heroic in their successes with translating materials into Spanish through the use of our interpreters.

B. DISASTER RECOVERY PHASE

Staff attended weekly meetings of the Flood Recovery Coordination Team coordinated by the National Guard. To facilitate recovery at Muscatine Island, division staff compiled a report detailing area background information and current needs assessment of residents.

IV. AREAS OF EXCELLENCE

Due to the efforts of the CAAs in responding to flood problems of the poor and the advocacy of the Division of CAAs, Iowa was awarded a Federal Emergency Supplemental grant under the State Community Services Block Grant in the amount of \$2,566,000 to assist low-income individuals and families directly affected by the flood disaster. CAA staff, throughout Iowa, attended flood relief meetings with other agencies in their communities to help develop plans to assist flood victims. Staff worked at distribution centers, sandbagged, prepared meals, and assisted individuals in filling out assistance forms. Local offices became distribution sites for food, vouchers, drinking water, school supplies and bedding. Information was mailed out to governmental resources as well as published in area newspapers, offering the local Family Development Centers as a source of assistance to those people who needed to apply to FEMA, SBA, or any source of flood assistance.

V. PROBLEMS/ISSUES

A. Initially, one of the biggest problems encountered was the unavailability of accurate damage information. FEMA did not seem to discover the capability of CAAs in reaching affected clients until late in the process. Despite massive coordination, the bureaucracy seemed to impede immediate help for desperate people.

Recommendations for Improvement:

- * Bring CAAs into state level emergency response plan.
- * Printed information of resources must be readily available.
- * Continue to network with other states.
- * The Division of Community Action Agencies will be preparing a "lessons learned" report at the conclusion of the emergency supplemental grant period, which will include recommendations based upon experience during the grant period.

B. There has not been a system in place to network with immediate action. This was implemented during the crisis and is in play today for use in disseminating public information. Before the flood crisis, people were not as aware of how many Latinos reside in Iowa, and especially there was little knowledge of how many are monolingual in Spanish. The greatest problem in all areas was the communication and language barrier.

Recommendations for Improvement:

- * Continue to publish materials in Spanish in critical areas such as Health and Human Services.
- * Maintain ties with media so that they give more air time to Spanish information in times of crisis.
- * Continue to network and build coalitions that meet on a monthly basis to follow-up and learn from this flood experience.
- * Identify more interpreting sources and keep communication open with them at all times, thus utilizing them with an emergency network.
- * Identify Latino community leaders who can mobilize the people with greater speed. i.e. when some Latinos did not want to leave their homes during the threat of a levee break. A respected community leader could have been called to influence them to evacuate.
- * That any published report or manual that results from the study of problems and provides recommendations should be translated into Spanish, so that all of Iowa's citizens can be better prepared for future disasters.

IOWA DEPARTMENT OF HUMAN SERVICES

FLOOD DISASTER AFTER ACTION REPORT

I. AREAS OF RESPONSIBILITY

- A. Administration and delivery of Emergency Food Stamps.
- B. Administration of Individual and Family Grant (IFG) program.
- C. Crisis mental health counseling services.
- D. Administration of flood supplemental funding for Social Services Block Grant (SSBG) services.
- E. Participation on state's Health and Human Services Flood Response Team.
- F. Maintenance of all regular human services programs despite crisis conditions.

II. ORGANIZATION DURING EMERGENCY OPERATIONS

- A. Central office staff were assigned to 24 hour coverage in the Emergency Operations Center as part of the full state response.
- B. Staff from central or field offices were assigned to the Disaster Assistance Centers (DACs).
- C. DHS's five regional offices, local offices in all counties, eight institutions, and central office in Des Moines provided a service network. All operations continued without interruption.
- D. Administration and central staffing for the Individual and Family Grant program was located at the Disaster Field Office (DFO), first in Cedar Rapids, then in Davenport, and finally in Des Moines. Contract staff were hired, trained, and deployed in each respective location.
- E. Staff were assigned to participate on the Health and Human Services Flood Response Team along with other state agencies.

III. SUMMARY OF EMERGENCY OPERATIONS

A. DISASTER RESPONSE PHASE

1. Emergency Food Stamps

From July 17 through July 30, DHS issued emergency food stamps in the 55 counties approved by the Federal Food and Nutrition Service (FNS). When the program ended on July 30, \$1,854,251 in food stamp coupons had been distributed to approximately 6,000 households of flood victims.

2. Individual and Family Grant Program

The IFG unit was established in Cedar Rapids in April. Staffing was comprised of a director and two staff. Additional staff were hired through Employment Services (Job Services Division) with subsequent relocation of the DFO to Davenport and ultimately Des Moines. This recruitment and training of staff was repeated in Davenport and Des Moines.

Peak staff level for this program was 28. Staff are trained to determine eligibility and process grants for personal property replacement, hazard mitigation made to minimize impact of future flooding, provide emergency living expenses for flood victims, and determine the eligibility and participation of IFG funding in relocation or buyout programs in cooperation with local governments in Iowa.

3. Crisis Mental Health Counseling

An immediate, crisis mental health, counseling plan was submitted to FEMA on July 23 and approved on July 27. Twenty-seven community mental health centers received local grants for outreach, counseling, screening and diagnosis, referral, and consultation and education services. Included in the plan was a grant to Iowa State University for "Iowa Concern," a flood crisis hotline. This immediate crisis counseling grant totalled \$855,917.

4. The Health and Human Services Flood Response Team

DHS participated in frequent meetings with other members of the flood response team, including the departments of Public Health, Elder Affairs, and Human Rights. These meetings helped to coordinate the applications each agency made to FEMA or for supplemental federal funding. The meetings were beneficial in avoiding duplication of efforts, filling gaps in service, resolving problems, and disseminating information to federal, state, and local officials. DHS forwarded over 40 requests for FEMA funding, frequently including requests for programs operated by other agencies but still within the purview of federal agencies related to DHS.

5. Maintenance of regular DHS service programs

Despite challenging working conditions and the temporary relocation of two county offices, DHS maintained all on-going regular services. Welfare assistance, child support checks, payments to providers of service, services for residents at the eight institutions, and social work services by local staff continued without interruption at a time many Iowans were especially dependent upon "business as usual" by DHS.

B. DISASTER RECOVERY PHASE

1. The Individual and Family Grant program is expected to continue at least another year. Totals through February 7, 1994, are 10,619 applications received, 6,924 grants awarded, and a total of nearly \$8 million of grant funds disseminated.

2. DHS is administering two additional mental health grants to provide services during the recovery phase. FEMA granted \$2,945,089 to extend the original crisis counseling grant for a full year and to cover all 99 counties. Also, a supplemental appropriation of \$2,614,000 has been awarded for services to vulnerable populations; for depression awareness training; for the National Rural Mental Health Centers

Conference; and to fund a "New Farm Crisis" program in the rural areas.

3. A supplemental of \$2,766,000 in Social Services Block Grant (SSBG) funding has been received from the US Department of Health and Human Services (HHS). DHS has contracted with the 25 most flood-impacted counties (based upon volume of FEMA requests) to use 75% of this special grant. The remaining 25% will be administered directly by DHS in the 74 remaining counties to purchase social services for flood victims who have not found any other source of assistance. Services can include day care during rebuilding, retraining, relocation, or search for new employment. A variety of family services to cope with crises are also major components of the SSBG program.

IV. AREAS OF EXCELLENCE

A. Emergency Food Stamps

Aided with special training and computerized support to field staff, a high level of quality control was maintained in this program. Unlike other states, error rates and fraud cases were held to a minimum.

DHS also received excellent support from the Iowa National Guard and from local law enforcement in providing security, crowd control, drinking water, restroom facilities, and general assistance to the public at the food stamp distribution sites.

B. Crisis Mental Health Counseling

DHS was fortunate to have had key staff in Washington, D.C. at the very time the President declared a statewide disaster. This played a role in speeding up both the application and approval process for requests for federal assistance.

Coordination was excellent with other state agencies, including the Departments of Public Health and Elder Affairs. These agencies also received funding for matters that were related and integrated into an overall flood recovery program.

C. Technical Assistance

DHS deeply appreciates the technical assistance received from federal officials (three officials were on-site in central office for over a week) and from other states. Florida deserves special mention for sending officials to Iowa to share what they had learned the previous year in the Hurricane Andrew disaster and to assist us in transferring a very useful software program for use in our IFG operations..

D. Individual and Family Grant Program

The core leadership of the IFG program were experienced workers in IFG, finance, and quality control. The temporary staff referred for hiring were excellent. The training and leadership developed a highly motivated and responsive work group.

E. DHS Staff

DHS is very proud of the staff work at the line-level throughout the state, both in flood relief

activities and in the important on-going services of the department. Despite high caseloads in normal times, the additional challenges of the disaster were met with high motivation and deep commitment.

F. Iowa Flood Recovery Coordination Team and Health and Human Services Flood Response Team

Both the Governor's Flood Recovery Coordination Team and the Health and Human Services Flood Response Team were excellent in providing information and coordination necessary to respond to the disaster quickly and effectively.

V. PROBLEMS/ISSUES

A. Individual and Family Grant Program

1. The Disaster Field Office was twice relocated. This required recruiting and training contract staff to handle the workload on three different occasions. As a result, processing of applications extended to over two weeks during a critical period of the crisis phase. Once stabilized, the IFG staff were able to reduce the turnaround time to 48 hours.

2. Grant processing operations were located in Kansas City. It would have been much easier to manage processing if the operation had been moved to Iowa. FEMA agrees with this recommendation for the future.

3. Assessing vehicle damage was the single most difficult part of determining the size of IFG grants. The process for determining vehicle claims needs to be improved. A backlog in vehicle claims has accumulated. At present we check ownership, registration, number of vehicles in a household and verify damages submitted by the applicant and a mechanic. Local verifications have been done by DHS staff throughout the state. This process has been slow and very difficult. Vehicle inspection possibly should be included within the FEMA inspection role in future disasters, and perhaps at least to the extent of the number of vehicles damaged in the disaster.

B. Application process for federal grants

Federal agencies, anxious to provide quick response, nearly overwhelmed DHS with requests for data and damage estimates. DHS was required to estimate Iowa's need for social service assistance during the period in which the floodwaters were still rising and no end was in sight. As a result, DHS filed "worst case" requests that assumed major damage to Iowa's infrastructure and an economic disaster to the state in general that might require the federal government to assume that maximum share of social services funding permitted by law. DHS's initial full list of FEMA requests totalled over \$900 million for a period of two years following the declaration of disaster. As it happened, the "worst case" did not happen. The DHS request total was far more than necessary and did produce a negative reaction from media who assumed DHS was attempting to raid the federal treasury.

A possible solution: Changes in the Stafford Disaster Act to automatically trigger federal assistance in key areas even before accurate damage estimates can be made. This would allow time for estimates to be made based upon actual data rather than either optimistic or pessimistic assumptions.

For example, if in the case of a statewide disaster, HHS were to make an automatic supplemental of 5% of the state's normal SSBG grant, then a stable source of funding would be immediately available. A 5% increase in need would seem to be a reasonable, even modest, assumption. As it happened, the final SSBG supplemental nearly six months after the declaration of disaster was very close to 5% of the state's SSBG regular grant.

Certain automatic triggers of federal funding in many areas of federal/state partnership ought to be carefully considered in possible amendments to the Stafford Act.

IOWA DEPARTMENT OF INSPECTIONS AND APPEALS

FLOOD DISASTER AFTER ACTION REPORT

I. AREAS OF RESPONSIBILITY

The Inspections Division of the Iowa Department of Inspections and Appeals (DIA) has the responsibility of licensing, inspecting, and regulating approximately 14,000 food establishments, restaurants, commissaries, and hotels in the State of Iowa. DIA has contracted with 34 county/municipal health departments to complete regular food safety and sanitation inspections as mandated by Iowa code in 80 counties. The remaining 19 counties are inspected by DIA inspectors. There are a total of approximately 80 staff members trained as food inspectors in Iowa among state, county and city agencies on full and part time status. Iowa has adopted model food codes from the US Food and Drug Administration which includes some basic provisions for food safety during disasters and emergency occurrences. Central Iowa Inspections Health Division (Polk County staff) is the contracting agency responsible for food inspections in Polk County and the surrounding vicinity.

II. ORGANIZATION DURING EMERGENCY OPERATIONS

The DIA Inspections Division is responsible for providing on-going training and FDA recommendations on disaster procedures to food inspectors in the state. The DIA Program Manager re-issued previous instructions and training materials from FDA by mail in early July as eastern Iowa counties started becoming affected by flood waters. Communication by phone was maintained by DIA with the contracting health departments on the current situation occurring in the flood-affected areas. Additional assistance from DIA staff was offered to these counties (eastern Iowa and the Ames area) during the week of July 5th, but all contracting agencies stated the food establishment surveillance was under control. Specific questions on salvaging food impacted by the flood waters were answered as they occurred. The contracting health departments are responsible for developing their disaster response plans in line with FDA and DIA recommendations.

III. SUMMARY OF EMERGENCY OPERATIONS

A. DISASTER RESPONSE PHASE

The disaster response by DIA and the contracting health departments was good until July 11th, when the flood crisis hit the Des Moines area and contaminated the public water supply. Iowa Food Codes require that food establishments have a safe water supply and electricity in order to operate. If neither is available, they must close until potable water and power can be restored. Approximately 1,500 establishments in Polk County were affected by the water and power outage, and Iowa had never before faced a disaster of this magnitude involving so many establishments at one time.

In the initial disaster response meeting with representatives from the Iowa Department of Public Health, Centers for Disease Control, the Food and Drug Administration, Central Iowa Inspections Health Division, and DIA it was decided that trying to close all the food establishments and restaurants in the affected areas would make the crisis worse. Some basic guidelines had to be developed quickly to answer

questions from the food establishments and the public. DIA was in daily contact with FDA officials from the Southwest Regional Office in Dallas, Texas. The Iowa Department of Public Health organized daily meetings at the capitol complex with federal, state, county, and city environmental health officials for approximately the first ten days of the crisis.

The Central Iowa Inspections Chief provided disaster information spots concerning food and lodging establishments to television and radio stations during the crisis. DIA provided phone coverage for hundreds of incoming calls daily, because Central Iowa Inspections phone system was not functioning for over a week. Copies of the update memos were faxed to establishments requesting them. The update memos were also delivered to any operating establishments by staff inspectors from Central Iowa Inspections, DIA, and the City of Des Moines. Other contracting health departments around the state offered assistance to Central Iowa Inspections Health Division. North Central Iowa Inspections (Cerro Gordo County) assisted by providing three inspectors to complete daily tests for chlorine residual on the temporary water supply stations set up by the National Guard around the City of Des Moines.

B. DISASTER RECOVERY PHASE

DIA and Central Iowa Inspections were in contact several times daily to update information and respond to complaints received. During the weeks of July 12th and July 19th, other contracting health departments reported more food establishments affected by the floods (Lee County, Johnson County, the City of Ottumwa, Shelby County, Carroll County, Black Hawk County, Van Buren County, Dickinson County, and Linn County), but most felt they had the staff to cover the situation. Updates from the Des Moines situation were faxed immediately to those food inspection agencies requesting it and sent by mail to others not directly affected. New questions came up daily and some of the updates had to be changed when a problem occurred. Establishments not willing to comply with the emergency guidelines were handled on a case by case basis by the assigned regulatory agency.

DIA and Central Iowa Inspections were also in contact with FDA investigators responsible for surveillance of wholesale food firms (food processors and food warehouses) in July during the second and third week of the flood crisis. All wholesale food firms without potable water were contacted by phone or in person by DIA, Central Iowa Inspections, or FDA. If food processors were operating, they were required to use commercially bottled water, or show evidence that the water transportation system was properly protected, tested, and chlorinated on a daily basis. Central Iowa Inspections continued to inspect restaurants and grocery stores in the Des Moines area and DIA was responsible for calling on the wholesale food firms.

IV. AREAS OF EXCELLENCE

The general spirit of cooperation of federal, state, county, and municipal agencies involved in environmental health, along with the public support in all counties in Iowa was exceptional during the flood crisis. Technical expertise was available through this cooperation, and the learning experience for food inspection personnel was one of a kind.

V. PROBLEMS/ISSUES

Some of the problems that arose during the flood crisis for DIA and the food inspection agencies included conflicting information received from FDA and CDC on one technical issue. This issue involved the use of commercial dishwashers in food establishments without potable water. When public water service was restored to the Des Moines area, the water was not potable. During initial disaster response meetings with the Department of Public Health and CDC, DIA and Central Iowa Inspections were told that when water service was restored food establishments could use non-potable water to operate commercial heat sanitization and chemical dishwashers. FDA officials from the Southwest Region Office in Dallas disagreed with the policy, and stated that dishwashers must be operated only with potable water to sanitize food equipment properly. Another problem was that two agencies, DIA and the Iowa Department of Agriculture and Land Stewardship, responsible for regulatory food safety, were not contacted initially by the Iowa Department of Public Health to attend the daily environmental health meetings on the Capitol Complex. The miscommunication was rectified, and more planning meetings were scheduled between Public Health and DIA.

Communication between DIA and contracting agencies could be greatly enhanced by the use of computer electronic mail during disaster situations and foodborne illness investigations. Following the flood crisis, a federal disaster grant was provided to purchase computer systems with modems for county health departments in all 99 Iowa counties. The computer system is tied into the Iowa Department of Public Health, but not DIA. The Inspections Division does not currently have computer hardware to tie into the system. However, DIA is exploring the federal disaster grant to determine if funds are available for purchasing this equipment. Since the majority of the food contracts have access to this computer system, it would allow DIA the ability to communicate instantly with the contracting health departments.

At a Food and Drug Administration Seminar in October, DIA food inspection staff attended an initial planning meeting of four midwestern states (Iowa, Missouri, Kansas, Nebraska) that were affected by the flood crisis. The FDA Southwest Region and these four states are in the initial stages of requesting a grant from the US Public Health Service, Office of Emergency Preparedness. This four state Food Safety Work Group is proposing that a disaster training manual for sanitarians be developed to aid us in our continued response to the Floods of '93. What we hope to plan is a combination of printed and video material that will be beneficial to both the sanitarians in the field and the program managers in central office to spot potential problems before they escalate. Work will start immediately if the grant is approved.

IOWA DEPARTMENT OF JUSTICE

FLOOD DISASTER AFTER ACTION REPORT

I. AREAS OF RESPONSIBILITY

In response to the massive flooding that hit Iowa in July 1993, the Iowa Attorney General mobilized her forces to fight consumer fraud relating to the flooding. Based on Florida's experience with Hurricane Andrew, we anticipated a variety of scams would be directed to flood victims, including price-gouging, home repair scams, false charities, and others.

II. ORGANIZATION DURING EMERGENCY OPERATIONS

The Iowa Attorney General's office is located in the state capital, Des Moines. However, we opened temporary satellite offices in several eastern Iowa towns that had been hard hit by flooding, including Davenport, Ottumwa, Burlington, and Fort Madison. These offices were set up to help us better protect consumers by using local media to publicize information consumers could use to help themselves avoid being victimized by flood scams. Staff at the satellite offices also monitored local activities and worked with local authorities concerning flood related scams. At each location, the Attorney General met with local officials and media to help publicize the local offices and to offer our assistance. The satellite offices are now closed. However, we felt they were quite successful.

III. SUMMARY OF EMERGENCY OPERATIONS

In addition to the efforts of our satellite office, we also got the word out to consumers on how they could protect themselves by having staff members participate in several radio and television interviews across the state. Other staff members took part in a weekly radio call-in program on a large Des Moines AM radio station. The Attorney General also travelled to other regions of the state to visit with local officials and media. In addition, we issued a series of press releases and consumer advisories on flood-related fraud topics and drafted a warning sheet concerning home repair scams that is included with each FEMA check mailing.

IV. AREAS OF EXCELLENCE

When the floods hit Iowa, the Florida Attorney General offered to fly members of his staff to Iowa to offer their expertise from Hurricane Andrew. One attorney and two investigators from his staff assisted by setting up a "war room" where complaints related to price-gouging during the flooding and recovery period were addressed.

Our office adopted an emergency rule defining price-gouging during or in the aftermath of a disaster, as an unfair practice in violation of the Iowa Consumer Fraud Act. We then recruited state and local retail and home repair business associations to assist us in publicizing the rule and encouraging their members to notify us of violations. We also set up a tollfree number state-wide for consumers to report price-gouging.

We received nearly 400 price-gouging calls during the three weeks following the major flooding in Des Moines. The vast majority of the calls related to sales of bottled water and soda, both in short supply due to the shut-down of Des Moines' public water supply. With the help of the Florida contingent, we investigated the most serious allegations. In most instances, businesses contacted were cooperative and either had not actually raised their before-flood prices or appeared to have legitimate reasons for raising their prices. However, it appeared to us that several portable toilet suppliers may have engaged in price-gouging. Thus, we contacted each company we could identify that served the Des Moines area during the aftermath of the flood and asked them to provide information relating to their before-flood and after-flood prices. We are currently reviewing their submissions and it appears several of the portable toilet companies were engaged in questionable practices.

V. PROBLEMS/ISSUES: None

IOWA DEPARTMENT OF MANAGEMENT

FLOOD DISASTER AFTER ACTION REPORT

I. AREAS OF RESPONSIBILITY

The Department of Management (DOM) has the responsibility of overall financial management of the State's revenue and expenditures.

II. ORGANIZATION DURING EMERGENCY OPERATIONS

The Department of Management did not significantly change its structure during the emergency other than to assign staff to track the overall financial damage to the state and analyze state general fund liability as a result of the disaster.

One budget staff member was assigned to EMD due to his previous work experience in that division.

III. SUMMARY OF EMERGENCY OPERATIONS

A. DISASTER RESPONSE PHASE

A Department of Management representative met as part of a 'core' staff during the onset of the disaster to assist in coordinating information and resources. The Department of Management also assisted in disseminating information to Executive Branch agencies.

B. DISASTER RECOVERY PHASE

The Department of Management coordinated meetings with agency disaster liaisons to begin the process of requesting recovery funds through the State's Emergency Management Division (EMD) and the Federal Emergency Management Agency (FEMA). DOM staff worked with Public Defense, EMD, and FEMA personnel to coordinate agency requests for funding. A representative from DOM served on the Governor's Flood Recovery Coordination Team. DOM continues to be involved in the assessment of state damage as it relates to the financial obligation for state general funds.

IV. AREAS OF EXCELLENCE

During the first few hours of the disaster, a group of Executive Branch department heads was brought together to put emergency plans into place. This helped in setting the stage for a collaborative effort in dealing with the disaster.

The development of a "form" to request disaster relief funding, identifying agency disaster liaisons, and having a central channel for disaster recovery/relief funds was very helpful in keeping a handle on the assistance the state was requesting. This process helped in communicating with EMD, FEMA, and at the congressional level when funding and program waivers were being requested. This also provided a "check and balance" to the information the Department of Public Defense was tracking.

The designation of the Governor's Flood Recovery Coordination Team was vital in addressing the state's issues during the response and recovery phase. The federal recovery meetings were also vital in enhancing communications between the state and federal agencies, as well as between/among federal agencies. Both forums provided the opportunity for a "check and balance" between state and federal officials of how well response and recovery efforts were progressing.

V. PROBLEMS/ISSUES

Better coordination and communication of the state's financial obligation for disaster recovery costs is needed. It is essential that the Department of Management be kept abreast of the overall state damage assessments and be given prior notice of any pending state general fund obligation that is presented to the Executive Council for consideration.

It would be helpful if ICN could be used to link fiscal information for tracking purposes. An electronic bulletin board system would also be beneficial in providing the most current information on weather conditions, disaster reports, etc.

IOWA DEPARTMENT OF NATURAL RESOURCES

FLOOD DISASTER AFTER ACTION REPORT

I. AREAS OF RESPONSIBILITY

The Department of Natural Resources is responsible for the management and regulation of natural resources in the State of Iowa. Areas of authority include air pollution, drinking water, energy, fish and wildlife, flood plain development, forests and forestry, geology, hazardous materials and conditions, parks, recreation and preserves, solid waste, water pollution, and water use. Specific responsibilities related to the 1993 flood disaster included protection of public drinking water supplies, monitoring of conditions in flood prone areas, protection of parks, preserves, forest and wildlife areas and the public use facilities therein from flooding, monitoring and control of the flood's effects on waste water treatment facilities and protection of Iowa's waterways from pollution discharges caused by flood events. A special assignment was given to the Department by the Governor when he created the Flood Recovery Coordination Team. That assignment involved working with the Department of Transportation in a comprehensive assessment of flood damage to Iowa's public infrastructure.

II. ORGANIZATION DURING EMERGENCY OPERATIONS

Because the Department of Natural Resources routine responsibilities fall into the area of resource and infrastructure protection, it was not necessary for the Department to implement any special organizational changes related to the flood emergency. Staff employed the usual chain of command and communication channels to assess, report, and deal with the flood's effects within the Department. In providing direct assistance to other state agencies and units of government, certain staff were temporarily "detailed" to other locations. For example, at a time of the worst flood crisis, the DNR Director staffed the disaster emergency operations center at the Hoover Building and participated in strategic planning to deal with immediate impacts. Staff of the DNR's Water Resources Section with expertise in floodplain management worked in the Emergency Management Division providing advice and expertise. Additionally, this staff answered questions and concerns from the public, government agencies and others concerned about floodplains and dam hazards. A staffperson of the DNR's Water Quality Section worked several days at the Des Moines Water Treatment Plant and served as the principal authority in reviewing and approving test results as the Des Moines system was brought back on line. Law Enforcement staff of the DNR assisted local law enforcement officials in emergency operations that included rescue and patrol. Similarly, staff from field offices of the DNR's Environmental Protection Division provided technical assistance and advice to local units of government whose water and waste water treatment plants were threatened. Both this and the law enforcement assistance are regular activities of DNR staff so no special organizational changes were required.

III. SUMMARY OF EMERGENCY OPERATIONS

A. DISASTER RESPONSE PHASE

As described above, DNR staff from the Director down served a variety of roles, all related to the DNR's regular responsibilities. Those roles included participating in the planning and mobilization of

statewide emergency response, offering technical assistance on floodplain management, answering questions about the Public Assistance program through FEMA and assisting in local law enforcement and public safety. Internally, DNR staff took numerous measures to deal with the immediate disaster. This included prompt assessment of damage to DNR operated public use facilities, issuing warnings to recreationists about dangerous conditions, providing assistance to the public directly affected, and producing news releases to keep the public informed about flood conditions and impacts. A significant action was taken when the Director entered into an agreement with the Army Corps of Engineers to construct emergency water conduits to relieve flooding in the Iowa Great Lakes Region.

B. DISASTER RECOVERY PHASE

As a member of the Transportation and Natural Resources Response Team with the Governor's Flood Recovery Coordination Team, the DNR worked closely with the Department of Transportation to compile a comprehensive list of infrastructure affected by flooding. The DNR also continues to work with entities that operate water and waste water treatment facilities as they repair and rebuild damaged facilities. In this area, DNR's role consists of permitting and monitoring to protect public health and prevent environmental pollution, and providing technical and financial assistance (via federal revolving loans) for such repairs and hazardous waste management. Whenever necessary, the DNR has accelerated its review and issuance of permits. On public owned lands managed by the DNR, work continues on repair and recovery of public use facilities. A comprehensive inspection of all DNR managed dams and spillways is being conducted (through the FEMA Public Assistance program) to assess any structural damage from the 1993 floods as well as to identify potential future problems in the event of future flooding.

IV. AREAS OF EXCELLENCE

Public Water Supply Protection: DNR staff worked closely with local public water suppliers whose facilities were damaged or threatened by the flood. As the Des Moines water supply was being brought back on line, a DNR staffperson was stationed at the waterworks plant to review test results and issue final authorization for a declaration that water was again drinkable.

Water Supplies and Wastewater Treatment: Staff of the Environmental Protection Division were authorized to temporarily waive discharge and other environmental standards when facilities were threatened or overtaxed.

Protection of Private Property Along Lakeshores: Staff stationed near the Iowa Great Lakes provided on-the-spot authorization for measures to protect shorelines on natural lakes when private property was threatened. Later, DNR issued a blanket "no permit" requirement for certain categories of shoreline protection for a one-year period.

Floodplain Management: Staff from the Water Resources Section worked closely with the Emergency Management Division to assess flooding potential in affected floodways and issued appropriate advisories.

Flood Recovery, Ledges State Park: With assistance from the National Guard, DNR was able to secure the volunteer assistance of nearly 100 cadets from the US Air Force Academy. The cadets worked three days on flood clean up at Dolliver and Ledges State Park along the Des Moines River, two of DNR's hardest hit areas.

V. PROBLEMS/ISSUES

FEMA response time: There appears to have been a lag time between the time of disaster, Notice of Interest, and the on site inspections provided by FEMA of DNR facilities. In some cases, it seemed as if state parks and other DNR lands were inspected last or not at all. A better understanding of how FEMA will conduct its inspections is needed and a more systematic approach to such inspections should be implemented if one is not presently utilized.

Unforeseen effects on Ledges State Park from Saylorville Lake: The Saylorville Lake Project did identify flood impacts, but it did not address the impacts on Ledges due to the frequency of high flow events experienced in the past ten years. Also, discussions with the Army Corps of Engineers should commence concerning the accelerated loss of flood storage capacity in the reservoir due to siltation and the additional flood impacts this is expected to create at Ledges.

Unforeseen effects of the Saylorville Downstream Corridor Recreation Trail: The Corps and the State of Iowa constructed the trail on land along the Des Moines River below Saylorville Lake with an agreement that DNR would maintain and repair the trail. Unexpected flood frequencies, accelerated releases from the Saylorville Dam and continued loss of flood storage have combined to create extensive damage to the very popular trail. A major portion of the trail has been closed most of 1993 and will take several thousand dollars to repair. Discussions should be initiated with the Corps about its responsibilities, and the maintenance agreement should be reopened for further negotiations.

IOWA DEPARTMENT OF PERSONNEL

FLOOD DISASTER AFTER ACTION REPORT

I. AREAS OF RESPONSIBILITY

The Iowa Department of Personnel (IDOP) is responsible for the human resource management function in state government. IDOP assists state departments in interpreting personnel policies, regulations and collective bargaining agreements as decisions affecting state employees are made. Topics of primary concern during emergencies include leaves of absence, hours of work, work schedules, overtime pay, safety, workers' compensation, and temporary duty assignments, among others.

II. ORGANIZATION DURING EMERGENCY OPERATIONS

During the flood emergency, the regular organizational structure of IDOP functioned, as intended, to facilitate quick responses to the changing circumstances. The department is organized into bureaus. The bureau chiefs report directly to the department director, not through division directors or deputy directors. This flat structure encourages cooperation between the bureaus on significant questions. To further enhance our responsiveness, a project room was established, out of which emergency related activities were coordinated.

III. SUMMARY OF EMERGENCY OPERATIONS

The department's emergency responses were focused on ensuring that state departments were provided with prompt and accurate responses to their personnel questions and problems. The director was among the group of department heads working directly with the Governor to make initial flood related decisions, including the decision to keep state office buildings open and staffed in spite of the lack of water and air-conditioning on the Capitol Complex. This decision was made because important government services were still needed during the flood crisis. As departments identified personnel problems and issues, IDOP responded with advice and information.

The department established a clearinghouse for state employee volunteers who assisted departments in maintaining essential operations. Departments that needed assistance were able to make requests for volunteers; departments that were able to make staff available could offer assistance. State employee volunteers were also provided to the water distribution centers established by the American Federation of State, County, and Municipal Employees/Iowa Council #61 (AFSCME) in Des Moines. While these employees "volunteered" to help other departments, they continued to be in pay status with their home departments.

As the Emergency Management Division expanded to cope with the extent of the flooding, the department worked closely with EMD to meet their personnel needs. Additional positions were established, assigned to the appropriate classifications, and qualified applicants were recruited. A personnel officer was dedicated to meeting their needs during the emergency. This became a full-time assignment for over three weeks.

IDOP also dealt with its own problems due to the flooding. The offices of the Iowa Public Employees' Retirement System (IPERS) are located at 600 E. Court Avenue, within the area that would have been flooded had the S.E. 6th Street levee failed. Within a few hours, the vital records for 50,000 retirees were moved to safe storage in the Grimes Building in the Capitol Complex.

IV. AREAS OF EXCELLENCE

Communications to other departments were timely. Electronic distribution was used whenever possible in order to avoid mail delays. Also, the volunteer clearinghouse was successful in providing temporary assistance to departments maintaining critical operations and to the AFSCME water distribution sites.

V. PROBLEMS/ISSUES

Four issues should be included in the planning for future emergencies. First, the role of the unions that represent state employees must be considered. Because they sincerely want to be good citizens, they offered their help and assistance. Because we did not have tasks identified for them, they sought their own ways of helping. AFSCME established a water distribution network for nursing homes, the elderly and the disabled. This required us to deal with issues caused by state employees wanting to volunteer to work at the AFSCME sites on work time.

The second issue is the application of the collective bargaining agreements during emergency situations. The agreements are negotiated on the assumption of normal operations and working conditions. The lack of air-conditioning and sanitary facilities caused less than ideal working conditions. However, government provides services that often are more important and essential during emergencies than at other times. It is not practical or possible to shut down. Contingency plans should be drafted that incorporate contacts with the unions representing state workers so that collective bargaining implications can be identified and problems addressed.

The third issue is created because state government operates statewide. Much of our effort was concentrated in Des Moines. However, other communities also experienced flooding and disruption to government offices. Contingency plans need to be flexible enough to deal with disasters in some communities and normal operations in others.

The final issue is planning for communications with the media. There needs to be better coordination between departments so that responses are prompt with consistent information. We need to better understand that what might work for one program area may not be needed or feasible for other program areas.

IOWA DEPARTMENT OF PUBLIC DEFENSE

FLOOD DISASTER AFTER ACTION REPORT

I. AREAS OF RESPONSIBILITY

The Iowa National Guard is responsible to provide various types of personnel and equipment support to state and local agencies during periods of declared disasters. This is rendered in a support rather than a lead status so that the lead supported agency is always civilian. The Guard normally supports in a state active duty (militia) status with the Governor exercising control through The Adjutant General.

II. ORGANIZATION FOR EMERGENCY OPERATIONS

The Guard forces were organized into task forces to provide support on both an agency specific and area basis. For example, TF 113 consisting of two subordinate task forces provided area support generally east of I-35 and south of I-80. Within that area, elements of the Guard worked with specific agencies and communities to provide assistance. In central Iowa, the task forces worked much the same way with the exception that one was given a specific water distribution mission.

Liaison and coordination teams from the state headquarters were placed in key city and county emergency operations centers (EOC) to facilitate Guard support for the impacted areas. State headquarters personnel were sent to the State EOC to augment the staff there for 24 hour operations. At the height of the disaster response, The Adjutant General sent the Deputy Adjutant General to the State EOC for the purpose of coordinating all state and federal response activities.

The National Guard EOC at Camp Dodge was activated and staffed for 24 hour operations commencing late on 27 June, and continued to operate on a 24 hour basis through 7 August.

One very unique aspect of our response effort was that out-of-state National Guard units were brought in to conduct the water purification mission, primarily for Des Moines area hospitals. Units from Alabama, Arkansas, Kentucky, North Dakota, and Ohio provided a total of 32 reverse osmosis water purification units with operators for the period 13 July through 2 August. CH-47 helicopters from the Texas Army National Guard were used to support operations at the Des Moines Water Works.

As of October 31, over 30,000 days of state active duty had been expended for flood support operations at a cost of over \$3,000,000.

It should be noted that very little active duty military support was used in the disaster response. Forces Command provided a total of 6 potable water tankers to assist in operations for the Des Moines area.

III. SUMMARY OF EMERGENCY OPERATIONS

A. DISASTER RESPONSE PHASE

Prior to 27 June, the Guard had provided limited support to the Cedar Rapids and Waterloo areas

because of flooding on the Cedar River in early April. Support was provided for sandbagging and aerial search. Our major response phase began along the Mississippi River on 27 June with sandbag and security operations for the Quad Cities area. As the river continued to rise, and the long crest moved downstream, additional communities and agencies requested support. The lower Iowa and Des Moines River Valleys started to present problems shortly after the July 4th weekend, resulting in more Guard support for a number of communities. It was at this point that widespread, very heavy rainfall in Central Iowa began to cause very serious local flooding in many towns. More rain was on the way.

The Guard continued to respond to numerous requests from an evergrowing number of communities through the first 10 days of July. Organization for missions was previously mentioned. On 10 July, the cities of West Des Moines and Des Moines began to experience severe flooding, resulting in the commitment of hundreds more Army and Air Guard members for sandbagging, evacuation, and security missions. It was during this situation that the Des Moines Waterworks was flooded out, causing a potable water shortage for over 250,000 local residents. Additional Guard members were then assigned to assist in establishing and operating distribution sites throughout the metropolitan area. At the peak of operations, there were over 2,000 Guardsmen on duty, with over 1,000 on duty in the Des Moines, area alone. The Guard also supported by dispensing water and operating a public shower point at Camp Dodge.

Operational support for eastern and southeastern Iowa ended on 30 July. Operational support in southwest Iowa terminated on 6 August. Water purification and distribution operations in Des Moines ceased on 2 August. All out of state personnel and equipment redeployed over the 5-16 August period.

B. DISASTER RECOVERY PHASE

The Guard normally is not involved in operational support for the recovery phase. However, elements of the 224th Engineer Battalion did complete several civil work projects in impacted communities as part of their home station annual training plan. One of these was the installation of a temporary bridge at the state fish hatchery near Spirit Lake.

The Deputy Adjutant General was named by Governor Branstad to lead the Iowa Flood Recovery Coordination Team, as Guard leadership was heavily involved in coordinating all recovery efforts.

Maintenance of equipment used and/or damaged during the response phase continued until completion. The temporary bridge is expected to be recovered in the spring of 1994.

IV. AREAS OF EXCELLENCE

A. The task force method of organization provided flexibility and good command and control.

DISCUSSION: The Iowa National Guard Emergency Plan envisions this type of command organization for use in all major support operations. Organic battalion and brigade headquarters are base units for building the force. If a battalion needs augmentation with specific types of resources, those resources are attached to battalion task force.

B. The Code of Iowa places emergency management supervision with The Adjutant General of Iowa.

DISCUSSION: In disasters where large numbers of the military forces are used, this works especially

well in providing a coordinated response. The military staff training in estimating, planning, and executing operations provided order and discipline to a massive and sustained effort involving both civil and military resources.

C. National Guard Bureau sent a forward liaison team to Camp Dodge to assist with logistics issues that were beyond command capability.

DISCUSSION: In other recent major disasters, NGB has done similar action. The team helped locate additional pumps, backup generators, and repair parts needed for the water purification and distribution mission.

D. A proactive media relations effort is essential to get accurate and timely information to the public.

DISCUSSION: When possible, a trained public affairs officer should accompany the supporting task force. This permits photo and print documentation of events as they happen and allows the commander to concentrate on the work to be done. In the absence of a public affairs officer, the commander or a person designated by the commander, must make themselves available to the media to present the Guard story. The Adjutant General took an additional step in writing letters to many newspapers, both in and out of state, to thank all of our fellow citizens for their support.

E. The state headquarters staff has routinely been used to augment the State EOC during federally mandated nuclear power plant emergency training exercises.

DISCUSSION: This training paid great dividends in the early stages of the Des Moines flooding since Guard personnel were basically familiar with how the EOC operated and who was responsible for doing a particular emergency support function. However, as time went on and fresh people were brought in, some problems were noted in how well the newcomers were briefed on roles and responsibilities.

F. Cellular phones were the key linkage for command and control.

DISCUSSION: Although military radios and normal telephones were available, using them tied key leaders to either a vehicle or a desk. By using cellular phones, the leaders were free to move throughout the supported area and maintain almost instantaneous communications, thereby saving a tremendous amount of time in coordinating actions. Where the service is available, the phones are a must for emergency operations.

G. The Department of Public Defense purchasing office was very responsive in meeting needs of the deployed troops.

DISCUSSION: Though staffed only for routine day to day operations, the purchasing office arranged for everything from foot powder to life vests, in providing the goods and services needed to support a variety of missions and situations. The missions simply could not have been done in many cases had they not provided this essential service.

H. Deployment and re-deployment of out-of-state Guard units went smoothly.

DISCUSSION: The soldiers and equipment that arrived in Iowa were basically treated as our own

from top to bottom. Our task force command structure looked to their every need to ensure that they were treated professionally in accomplishing their mission. They were housed and fed either at their work site or in Camp Dodge billets. The task force commander made regular phone contact with the units' home state command to keep them informed of progress on the mission. At the close of operations, all of the equipment that had been flown in was taken back to its home station by our truck drivers. All of the soldiers who came to Iowa were given recognition in the form of ribbons, awards, and certificates.

V. PROBLEMS/ISSUES

A. One problem surfaced was that there was a lack of depth of knowledgeable people from many of the agencies required to be in the State EOC.

DISCUSSION: The primary designated responders who had worked on the previously mentioned nuclear power plant exercises had the basic expertise to commence a very intense operational period. However, as these people became exhausted, their replacements were not properly prepared and briefed as to what their authority was and which agency was responsible for Emergency Support Functions under the Iowa Multi-Hazard Plan.

RECOMMENDATION: State department heads must ensure that there is adequate depth on their teams for sustained operations. This is especially critical during the initial 72 hours of operations when there is already enough confusion in getting a coordinated response in place. One method would be to conduct departmental training on the basic plan with emphasis on department/agency responsibilities followed by a State EOC level exercise lasting 18-24 hours where each department would be required to demonstrate at least one shift change.

B. A number of State Area Command (STARC) soldiers who were full time employees were assigned to perform operational support, taking them away from critically needed administrative and logistics functions that were essential for support of all field operations.

DISCUSSION: It is understandable how all available troops would be involved in a massive initial response. However, administrative and logistical functions needed for sustained operations must be an important consideration when tasking out missions. If additional troops are required within the impacted area, they should be brought from outlying units rather than stripping out soldiers from critical headquarters functions.

RECOMMENDATION: Guard EOC operations officers must be cognizant of total force current and potential requirements when tasking out missions.

C. Some units did not keep accurate soldier accountability records as required by the Guard Emergency Plan.

DISCUSSION: Unit commanders either were not familiar with or did not enforce strict personnel accounting. This resulted in many soldiers receiving late pay and/or other entitlements. As of 26 October, we were still receiving requests for orders for duty performed in July. It is essential that commanders and their junior leaders maintain accurate daily (and sometimes hourly) strength reports for pay, reporting, and safety purposes.

RECOMMENDATION: Battalion commanders must ensure that their unit commanders are familiar with and enforce the personnel accountability and reporting requirements of the Guard Emergency Plan for state active duty.

D. The established system for publishing state active duty orders was not implemented, and personnel unfamiliar with administrative requirements of state active duty attempted to establish a whole new system.

DISCUSSION: The existing system for orders never envisioned placing over 2,000 soldiers on duty at one time or for multiple iterations of duty at locations virtually all over the state. It was set up for central input based on unit personnel attendance records and the orders were done after the duty was completed. In this disaster, soldiers were ordered to duty not knowing when the duty would end. Therefore, potential pay problems were being generated since individual payment for duty had taken 2-3 weeks after duty completion, historically. The pay problem interim solution was to use a cash advance casual payment to the soldier. The eventual solution to the orders problem was to send an edit list to the unit for verification of duty dates on each soldier who had been identified as having performed duty.

RECOMMENDATION: The Military Support Officer, Orders Section, Comptroller, and unit administrators should form an action team to come up with a revised system that closely mirrors the federal orders process in order to expedite input, improve personnel accountability, and to streamline the whole orders process.

IOWA EMERGENCY MANAGEMENT DIVISION

FLOOD DISASTER AFTER ACTION REPORT

I. AREAS OF RESPONSIBILITY

The Iowa Emergency Management Division (IEMD) is responsible for the administration and operations of disaster preparedness, response, recovery, and mitigation programs.

PREPAREDNESS

- * Develops and maintains of state multi-hazard plans encompassing natural, man made and technological hazards.
- * Trains in the four phases of emergency management (preparedness, response, recovery and mitigation) related to all types of disasters.
- * Coordinates with state, local and federal agencies in each phase of emergency management.

RESPONSE

- * Serves as Governor's Authorized Representative (GAR), and State Coordinating Officer (SCO).
- * Provides technical and personnel assistance under conditions of a non-declared emergency or disaster.
- * Provides enhanced technical and personnel assistance to include coordination of state resources under a Governor's Emergency Proclamation.
- * Responsible for coordination, gathering, organizing and submission of adequate information to the Governor when a Presidential Disaster Declaration is sought.
- * Responsible for the coordination of all agencies when the Federal Response Plan is implemented, and organization and management of the State Emergency Operations Center.

- * Coordinates with all state agencies prior to and during disaster response activities.

RECOVERY

- * Serves as Governor's Authorized Representative and State Coordinating Officer.
- * Coordinates initial damage assessment in conjunction with affected counties.
- * Under the condition of a disaster declaration, manages Public Assistance and Hazard Mitigation Programs.

- * Supports an enhanced damage assessment program to facilitate financial aid to damaged jurisdictions.

- * Under the policies of a disaster declaration, jointly establishes and coordinates Disaster Assistance Center operations with Disaster Field Office management.

MITIGATION

- * Coordinates mitigation programs which postpone, dissipate, or reduce the effects of a disaster.

Emergency management begins at the local government level. Local officials are responsible for assessing the potential threat of a variety of man-made and natural hazards; for mitigating the effects of these hazards, and for planning, training, and exercising in preparation for disaster events. Local officials render the initial response to a disaster situation and provide important integrative and informational functions in the management of a disaster. They maintain their own emergency operations centers and coordinate activities of local responders and voluntary organizations.

IEMD works in conjunction with local officials in facilitating their emergency management efforts by assisting and providing guidance in hazards analysis, providing training programs, and assisting in the development of exercise programs.

Once the effects of a disaster surpass local government's ability to respond, it is IEMD's responsibility to coordinate and facilitate state response and assistance. In accomplishing this duty, the division works closely with the Governor's Office and each department and division of state government that may play a role in responding to local government needs. Division coordination may include opening the State Emergency Operations Center and having agency representatives there to concentrate their disaster efforts.

II. ORGANIZATION DURING EMERGENCY OPERATIONS

IEMD began responding to flood concerns as early as mid-March. In the early stages of the flooding, calls to the State EOC from city and county officials were placed to express flooding fears and questions on river levels and needed resources.

As the rains continued and increased readiness in Iowa began to build, the State EOC, located on A-level of the Hoover State Office Building in Des Moines, was staffed by divisional personnel and open during normal working hours. During non-working hours, communications and concerns were controlled by contacting the 24-hour duty officer. As rain increased and rivers rose and flooding became more intense and widespread, the need to increase staffing and operating hours advanced the EOC into 24-hour operations. Numerous state and federal agencies were represented in the EOC or available for specific needs.

III. SUMMARY OF EMERGENCY OPERATIONS

A. DISASTER RESPONSE PHASE

The State EOC functioned as a 24-hour, fully staffed operation from June 27 until July 30, 1993. The control of briefings and coordination of traffic flow within the EOC was the responsibility of the EOC Chief of Staff. Due to the demand on Emergency Management staff, officers from the Iowa National Guard were assigned this task, as outlined in the Iowa Emergency Plan. Situational briefings were scheduled twice daily. Personnel from numerous state and local agencies were brought in to add continuity to day-to-day office staff in answering phones and support of the primary EOC participants.

The Governor not only issued disaster proclamations, he also exercised his powers to waive restrictive rules and timeliness that would otherwise have impeded disaster response and recovery efforts. Specifically, the Governor:

- * Extended his disaster proclamation to enable local government to continue to avail themselves of state resources.
- * Waived state rules requiring the advertisement of bids for certain transportation projects.
- * Suspended limitations on funding requirements for arts organizations.
- * Extended time for completing Emissions Inventory Questionnaires (EIQs).

Multiple activities took place in direct support of the EOC operations. These operations consisted of:

- * An advanced media operations center, located on A-level of the Hoover Building, just outside of the EOC as designated in the Iowa Emergency Plan.
- * Kitchen facilities in support of the EOC, located on B-level of the Hoover Building, as designated in the Iowa Emergency Plan. These facilities were operational for only a brief period, after which time this component was taken over by volunteer organizations.
- * Shower facilities, located on A-level of the Hoover Building adjacent the EOC, as designated in the Iowa Emergency Plan. These facilities are supported by their own water supply and were operational due in large part to the flooding of the Des Moines Water Works and loss of city water.

Concern built, as the flood response continued to create additional demand on the already crowded and stressed EOC operation. As a result, an alternate area was designated and equipped on B-level of the Hoover Building to respond as needed. Of primary concern was implementation of the state's Radiological Emergency Response Plan (RERP) and the four Nuclear Power plants addressed by the RERP plan.

The coordination of the huge demand for resources is addressed in the Iowa Emergency Plan. Separate work areas on both A & B-levels of the Hoover Building were designated to administer this portion of the emergency plan.

On July 11, 1993 the demand for state resources increased once again with the flooding of the Des Moines Water Works and the additional problem of an estimated 250,000 residents without water. Meetings were held at the State EOC to coordinate the relief effort needed to satisfy the water needs for both businesses and residences in a four-county area for the next twelve days.

Some of the major areas where the state provided assistance to the Des Moines area on July 11, 1993 were:

- * Assistance in formulating a strategy in how to distribute emergency drinking water to the citizens in need.
- * Assistance in locating and providing hygiene items, such as portable toilets.
- * Military assistance in providing water purification units for the hospitals in the City of Des Moines.
- * Military assistance in securing and reestablishing the operation of the Des Moines Water Works. A major portion of this assistance consisted of helicopters to lift equipment into and out of the location along with numerous flights with sandbags to secure the levee surrounding the water plant.

COMMUNICATIONS

During the floods, Emergency Management personnel were being dispatched throughout the state. Communications used by field personnel were telephone, pagers and cellular phones. Commercial landlines were the main connectivity to the State EOC.

The State of Iowa Emergency Broadcast System (EBS) was activated to warn the citizens of the increasing flood threat as is emphasized in the Iowa Emergency Response Plan.

The Radio Amateur RACES group provided 24-hour communications for several Emergency Operations Centers in Des Moines. They provided rumor control information along with personnel tracking.

Computer equipment and supporting software increased as additional agencies occupied the EOC.

Telephone line overload became an increasing problem in the EOC as the disaster continued. Donation calls contributed to this problem. The need to more closely coordinate donation efforts necessitated the establishment of a donations operations center outside the main EOC.

Fax machines were being tied up by lengthy reports, e.g. Situation Reports (SITREP), reservoir status reports, etc. Additional fax machines were purchased to alleviate the burden on the system. A total of four machines were purchased for the following locations; Disaster Field Office in Davenport, donations group, public affairs personnel and a backup machine for State EOC.

The FEMA MERV (Mobile Emergency Response Vehicle) was requested to respond from Denver, Colorado. The request originated due to the threat of elevated river levels at the Grand Avenue

Bridge, posing a potential loss of communications to the State EOC. An additional threat occurred when numerous large pleasure craft anchored in Birdland Marina, just north of the Grand Avenue Bridge, were torn from their docking as river levels continued to rise. The Grand Avenue Bridge carries telephone lines to the offices located in the Capitol Complex and were in danger of being severed.

The MERV vehicles also provided emergency power generating capabilities. In addition, water purification capabilities and air conditioning, which is vital to the continued usage of sensitive electronic equipment was provided.

Radio communications were established with the MERV's units with the use of FEMA's FNARS (FEMA National Radio System).

LOCAL GOVERNMENT ACTIVITIES

PREPAREDNESS: During the preparedness phase, Emergency Management personnel were cognizant of the planning and preparedness requirements and expedited a review of what was in place within their county, towns, and cities. Not only were exercises conducted, but a series of activities took place when it became evident that flooding was eminent. Partially, those activities included:

1. Plan checklists were reviewed and plans updated appropriately.
2. Warning systems were checked as well as the Emergency Communications systems.
3. Evacuation plans were checked and updated.
4. All resource inventories were confirmed and emergency personnel and volunteer rosters were confirmed for accuracy.
5. A decision was made on the prepositioning of sandbags followed by procurement and storage within the county.
6. Public notification and media contacts were confirmed according to local plans.

Disaster operations became more intense as the duration of flooding increased. Depletion of resources required constant monitoring of weather conditions, replenishment and sustainment of volunteers, maintaining a stock of supplies on hand for immediate use, and determining when it was time to replenish those supplies, to name a few. As a result of flooding in previous years, most local jurisdictions had reviewed their resource lists and the local emergency operations plans. However, even the best plans could not handle six months of flooding, three river crests and flooding in every area of the state without outside assistance.

RESPONSE: The flood waters and heavy rains caused numerous, ongoing problems in counties that eventually involved virtually every county agency and many state agencies as well. Examples of the response activities in a sampling of counties include:

CLINTON COUNTY:

When the flood crested at Camanche, the water level was 23 feet, breaking all recorded levels. Flood stage is 17 feet. The level of preparedness in Clinton County was primarily motivated by the county's planning, training and exercises associated with a nuclear power plant located across the river in a neighboring state. There was initially a shortage of volunteers to help fill sandbags. In addition, obtaining more sandbags to meet the demand was difficult. Also, there was a slight delay in completing some response activities for public protection, but none so significant that it affected life or property. Sand itself was never a problem as several rock quarries were located nearby, and companies agreed to supply the sand where it was needed.

With water invading roads, homes and city sewer systems, the need for assistance was immediate. A request for state assistance was necessary at this time. The National Guard was summoned and most expeditiously responded, serving to fill sandbags and post guard to keep "sightseers" away. Clinton County Emergency Management also requested assistance from the local Red Cross Chapter to help feed the masses combating the flood for the duration. They also assisted the citizens of Clinton County, through the Emergency Management Coordinator, with housing the displaced and by conducting damage estimate surveys.

JASPER COUNTY:

Sandbagging began as soon as high water and flooding was reported upstream. Volunteers from Colfax and surrounding communities were called in through mutual aid notification. The water depths were closely monitored for several days until evacuations were complete by persons who received basic training through the local Emergency Management Coordinator. Evacuation was completed by using house to house notification by local volunteer firemen, while adjoining towns covered fire and ambulance calls for Colfax during this time. The Red Cross opened a shelter at the Colfax-Mingo Grade School. The same site would later become the service center for the Red Cross and a local Disaster Application Center.

KOSSUTH COUNTY:

The local radio stations were called together to finalize strategies and possible needs. Construction companies were on hand to provide many resources that had been identified, such as heavy equipment, sand, trucks, pumps and personnel. With the assistance of Iowa Department of Transportation, detour signs and barricades, road closure procedures were implemented. Diking and sandbags were utilized prior to the rise of river levels to prevent buildings from being inundated by the floodwaters. In business areas with temporary diking, dikes were opened only enough to allow traffic to enter to facilitate some business operation.

LINN COUNTY:

Although the Linn County EOC was abandoned six times last summer due to high water, Linn County Emergency Management dealt with the situation effectively. Leaving the emergency operations center and relocating made response even more difficult. Maintaining comprehensive communications with the media and local officials kept the situation under control. Coordination with state officials was slightly hindered due to the inexperience of the county coordinator and the newly elected Mayor of Cedar Rapids. As Linn County officials realized the state's procedures and became more comfortable and

familiar with them, the situation eased. Many resources requested from the state were ultimately located and used in Linn County. Cooperation from surrounding counties and EMA coordinators was excellent. They often provided information or resources that could not be found elsewhere. As the flooding progressed into the summer, the forecasts from the National Weather Service were not as accurate as they were earlier. Communication with the state became more difficult due to new or temporary office personnel. Volunteers manning the telephones at IMED were not always familiar with the personnel or the procedures of the state office or with the nature of the local government's requests.

LOUISA COUNTY:

In Louisa County, the County Multi-Hazard Emergency Operations Plan was put into action. The county coordinated an evacuation of one city and attempted to evacuate another large, unincorporated area; dealt with contaminated water supplies and provided potable water to one city and 200 other people within the county. Red Cross assisted in the housing for evacuees. Some residents lived in motels for up to six months.

The influx of media requests (local and national) became overwhelming as public interest increased. Local stop points were in place to stop networks from getting through to get their story, any story, unless they used the prescribed means to attain public information. Official tours were organized in the Emergency Management Office. However, with the magnitude of this flood, there was no way one coordinator could accommodate all the touring officials and give assistance to the flood victims at the same time. The ongoing, actual fight of the flood waters seemed easy compared to the political and individual needs that were requested.

MUSCATINE COUNTY:

The main function of the response phase was approached by coordinating all activities through a central point to make sure things were being done as prescribed in the Multi-Hazard Emergency Operations Plan. People were kept on levees to make sure monitoring was maintained; those people who needed to be evacuated were taken care of; rumor control was established with the media. In short, anyone who needed assistance was put in contact with those who could help them, in accordance with the local plan.

POLK COUNTY:

Polk County had to respond to a vast number of flood related events in 1993 to include the historical loss of the Des Moines Water Works. This one event left 250,000 citizens without water for several days. The problems that followed were numerous, to include the task of furnishing drinking water and sanitary facilities to the citizens. The loss of firefighting capability severely impacted the commerce of the city. Many businesses were unable to function due to blocked streets and the lack of sanitary facilities.

Additional concerns in Polk county centered around major flooding in West Des Moines and the threat to businesses in both this area and along Court Avenue in downtown Des Moines. The loss of a major electrical substation along the Des Moines River caused power outages in parts of Polk County. Close coordination with the electrical supplier caused additional stress on the already burdened Polk County Emergency Operations Center. New and larger EOC facilities became necessary as a direct result of the magnitude of the events occurring. Numerous planning and logistical items are being addressed

as a result of the 1993 flooding in Polk county.

B. DISASTER RECOVERY PHASE

Clean-up began immediately after the water receded. Damage assessment began actually during the response phase and carried through the recovery and mitigation phase. Damage assessment in many cases was not done by the local coordinator, instead was done by a team designated during the preparedness and planning phase. FEMA inspectors were in local areas for both public and individual assistance programs. It should be noted, however, that several persons interviewed did not apply for either public or private assistance because of the complexity and time requirements of the endless paperwork. Those who did apply, however, received assistance from FEMA, the Small Business Administration, Red Cross, Housing and Urban Development, Block Grant Programs, and numerous individual assistance programs. Private grants were also awarded for assistance to individuals and communities. During recovery, local jurisdictions learned the importance of keeping accurate records of cost, labor and materials. It was suggested that a contact person be identified to collect and maintain the records collected by damage assessment teams.

VOLUNTEER, CLEAN UP AND DONATION COORDINATION

During the response phase, a volunteer/donation/needs coordination team was established in conjunction with the EOC. Due to the magnitude and the media coverage IEMD was faced with regulating nationwide personal and business donations with actual unmet needs in Iowa. The state requested FEMA assistance in establishing a donations/unmet needs database. As a result of the work with FEMA, the state developed a very efficient donations/unmet needs process. To support the operation, IEMD activated the cooperative action agreement which allowed for County Emergency Management Coordinators to staff the phone calls received from individuals providing and/or requesting assistance.

Iowa received donations from all over the United States as well as people and businesses abroad. The outpouring of goods was enormous. On the onset of the disaster, many unsolicited goods were received. Although this was initially a problem, the donations coordinators were able to maintain control and coordination of goods coming into the state. Because of unsolicited goods causing problems during Hurricane Andrew in Florida, the donations team established a policy that no goods would be accepted unless a volunteer group, government agency or private concern was willing to accept the responsibility for receivership.

It was very apparent to the team which included representatives from major volunteer organizations (Red Cross, Salvation Army, Food Bank of Iowa, United Way, Adventist Community Services, VOAD, and others) that the donations area is a highly visible and politically charged component which deserves significant attention at the federal, state and local level. Attention was given to each donor and each agency or citizen expressing a need.

A process for handling offers was established and sustained. Reports of items offered were printed daily and distributed to the coordination team, volunteer agencies, management staff, and county agencies for referral.

PUBLIC ASSISTANCE (PA) PROGRAM

The intent of the program is to provide disaster assistance to governmental entities, tribes and tribal organizations, and qualifying private nonprofit organizations which provide services of a governmental nature. The assistance provided is intended to restore the applicant to pre-disaster conditions.

In early 1993, the state had one contracted employee who was responsible for the administration of all previous six Public Assistance disasters. During the month of July, this individual was responsible for gathering preliminary damage assessments from local officials for all 99 counties for the purpose of requesting a Presidential Disaster Declaration for Public Assistance. The State of Utah provided additional assistance during the initial response period by sending a PA officer to assist the IEMD staff located at the DFO in Davenport. On July 21, 1993, the initial declaration was received for 10 counties, two more PA officers were added to the program, along with an individual to assist with administrative support. The three PA officers conducted applicant briefings for sixty counties that were declared or anticipated to be added to the declaration.

The state PA staff of five was required to maintain a presence at three locations; Davenport, West Des Moines, and the State EOC. This situation of multiple sites required much extra effort to coordinate the Public Assistance activities. During the month of August, one of the primary objectives for the state was to gather damage information, for the purpose of adding counties to the PA declaration. At this time two more officers were added to the program along with an administrative support assistant. The program was located in the Disaster Field Office in Davenport. During the first week of September all PA functions were consolidated at the DFO in downtown Des Moines, and in a position to begin the damage survey report (DSR) approval process. By this time, the state had five public assistance officers, six program support/fiscal personnel located at the Disaster Field Office. In addition, the fiscal department at IEMD increased from one to five.

There was a significant amount of effort made to notify potential applicants of available assistance. Radio, TV, and print media greatly assisted this effort. Over 1100 applicants have responded and been entered into the Public Assistance system.

It was recognized that the previous spread sheet based system was inadequate to administer the magnitude of this disaster. It was clear that the system would need to be upgraded to a database system. A FEMA program specialist and a State PA officer produced the first edition of the DBASE III version just prior to the relocation to Des Moines. Computer equipment capable of supporting a Local Area Network was requested to connect the state's equipment for centralized record keeping, and increase the efficiency and accuracy of application processing. In addition, the state received a donated network operating system from outside the state.

One significant factor in the PADSR approval process development was the IEMD's commitment to quality control. This division required that checks and balances be in place to avoid duplication of payments, errors, or overlooking eligible applicants entirely. The PA staff needed two weeks to develop and implement a quality DSR approval process to handle over 9000 DSRs totaling over 40 million dollars.

There was a concern regarding the quick dispersal of FEMA funds to the applicant. There were numerous discussions regarding the relaxation of previously established quality control guidelines to expedite the money to the applicants. A complete application was required from each applicant prior to

the disbursement of funds. It is important to note that the inspection process continued for all applicants without regard to the completeness of their applications. Only the disbursement of funds was contingent on the applicants completing their application.

A Congressional request was made for the General Accounting Office (GAO) to conduct an investigation to determine why there were delays in payment of federal funds to local communities in Iowa and other states, and the steps to be taken to promptly facilitate their distribution.

In 1994, the GAO conducted a preliminary audit in Iowa and Missouri. The following were their observations:

Distribution of FEMA PA grants:		44% of projects funded in less than 30 days	
0-14 days	8%	61-90 days	12%
15-30 days	36%	91-120 days	5%
31-60 days	37%	over 120 days	2%

- * Many of the applicants did not attend the PA briefings
- * State inspectors were not at all survey sites
- * In late summer-early fall the state became more aggressive in the collection of the required documentation
- * Little time between FEMA and check to applicant

On September 27, 1993 the President authorized an amendment for DR-0996-IA to allocate federal funds for Public Assistance at 90% of total eligible cost, except for direct federal assisted cost for emergency authorized at 100% funding. The transition from the funding of 75% to 90% allocation was very difficult. The following were some of the obstacles:

- * The FEMA computer system was not changed for several weeks after the decision had been made to increase the federal funding percentage.
- * Since the initial allocation was made at 75%, the PA office had to go back through the previously written payments and rewrite an additional 15% payment on previous files.
- * The final allocation to convert the supplements that were previously written at 75% to 90% was received in a piece-meal fashion and long after the decision to make the change.
- * The pay requesting procedure was prolonged since the 90% payments were being processed as well as the 15% payments; this added to the work load to ensure accuracy.
- * In addition, the office had to place another mailing to ensure the applicants had the proper paperwork to reflect the fact that the grant percentage had been changed.

IEMD procured a \$425,000 grant from FEMA to develop a Geographic Information System (GIS) multi-

layered database that will allow federal, state, & local officials access to consolidated, geo-referenced information and maps to include an inventory of levees, soils, wetlands, floodplains, greenspaces, river gauges, roads, bridges, utilities, hospitals, schools, dams, and railroads. However, two pieces are missing from this project that would make it a national prototype. First, maintenance to keep the database current and useful requires funding to procure qualified staff in the long term picture. Secondly, IEMD is continuing to convince FEMA, DOD, NOAA, and TVA to provide real-time digital elevation data that is available through their existing staff and equipment resources.

IEMD entered into an agreement with FEMA to fund staff from National Park Service (NPS) to assist state and local officials with addressing the perils of certain types of development in a floodplain. In cases when 404 Hazard Mitigation Program Grants (HMPG) are used to buy-out and remove development from a floodplain which creates greenspace, future development within these areas will not be eligible for disaster assistance monies when damages are caused by flooding, a tornado, or other similar catastrophe.

HAZARD MITIGATION GRANT PROGRAM

Program Overview

The Hazard Mitigation Grant Program is designed to reduce or permanently eliminate the long term risk to human life and/or property from natural hazards. Mitigation measures are identified following the evaluation of natural hazards that have resulted in a Presidential Declared Disaster. Pursuant to the guidance set forth by the Robert T. Stafford Disaster Relief and Emergency Assistance Act, FEMA makes Hazard Mitigation Grant Program funds available to the state in accordance with the following federal regulations:

- * The total federal funds provided shall not exceed fifteen percent of the total estimated federal grant assistance (excluding administrative monies) provided under the Stafford Act. Grant assistance is available under Sections 403, 406, 407, 408, 410, 411, and 416 of the Stafford Act.
- * The federal funds provided will be based on the cost sharing provisions outlined in the FEMA-State Agreement. The federal share of Hazard Mitigation projects may not exceed 75% of the cost for those projects.

The non-federal share of projects may exceed the federal share. The excess may be provided from a combination of state, local, or private funding sources. However, Section 404 funds cannot be used as a substitute or replacement to fund projects or programs that are available under other federal authorities, except for circumstances of extraordinary threat, nor can they be used as a match for other federal funds. The Emergency Management Division is the grantee for the HMGP within the State of Iowa. Subgrantees may include: state agencies, local units of government, and private non-profit organizations, and Indian Tribes.

Hazard mitigation measures must meet the following minimal criteria:

- * May be structural or nonstructural measures for public, private non-profit, or private property, if sponsored by a public entity.

- * Must be cost effective and environmentally compatible.
- * Must not duplicate other federal, state, or local mitigation actions.

Eligible projects that might potentially benefit from Hazard Mitigation Grant Program funds include, acquisition or relocation of homes, retrofitting facilities, construction activities that will result in protection from hazards, structural hazard control or protection projects, and development or improvement of warning systems.

Mitigation Actions from Previous Disaster Declarations

The most important aspect of the floods, from a mitigation perspective, was the changes that were legislated and approved at the federal level, to increase both the funds generated for the Hazard Mitigation Grant Program and the project by project cost share. The legislation, known as the Hazard Mitigation and Relocation Assistance Act of 1993 amended the percentage of Public Assistance from 10% of permanent restorative work to 15% of total Stafford Act eligible assistance (except administrative costs). This modification to the funding formula increased the amount of funds available for mitigation grants from an estimate of \$3.6 million in late August of 1993 to a projected total of \$31 million in mid April of 1994. Additionally, the Stafford Act revision increased FEMA's portion of the cost share for projects from 50% to 75%, which created a more beneficial financial arrangement for successful applicants.

Hazard Mitigation Grant Program Administration

The state, at any time a Presidential Disaster occurs, must revisit and revise both the Hazard Mitigation Administrative Plan (Section 409 plan) as well as the Hazard Mitigation Grant Program Administrative Plan (Section 404 plan). Due in large part to the frequency of Presidential Disaster Declarations in Iowa over the past three to four years, both of these plans were in need of major renovation.

The Section 404 Plan has been revised, updated and approved by FEMA. This plan sets forth the specific administrative requirements that both the state and applicants who have been awarded grant funds must follow with regard to financial accounting, individual project administration, disbursement of eligible grant funds and general regulatory guidance for all aspects of the grant program administration. This plan, in a current and approved condition, is mandatory before Hazard Mitigation Grant Program funds can be either approved or obligated by FEMA.

Important components of the administration of the Hazard Mitigation Grant Program are the staff members assigned to manage the program. In past disasters applicants have been few in number and required minimal assistance in developing applications for funds as well as projects. With every county in the state eligible for mitigation grants, determining the staff requirements early in the disaster was a difficult task. Aligned with the early estimate of \$3.6 million was a rather minor staff requirement for program administration. However, a larger staff of hazard mitigation coordinators was mandated by a nearly ten fold increase in available funds. Measured personnel requirements have resulted in a staff of four hazard mitigation coordinators under the supervision of the hazard mitigation officer. Responsible for ensuring that all applications meet the state criteria for project selection, the coordinators have provided assistance to applicants by developing informative applications with clearly defined project goals and outcomes.

Assisting the applicants at the local level are representatives of the various councils of governments (COGs) from around the state. Regional planners employed by the COGs have proved an invaluable resource to the communities that might not have qualified grant writers on staff to prepare applications for mitigation grants. By attending bi-weekly meetings held in Des Moines and targeted at providing a forum for discussion of a host of flood recovery questions, hazard mitigation coordinators have been provided a direct link with the applicant communities served by the COGs. This process, initially served up as an experiment, has evolved with some degree of growing pains. There was an intense effort made to familiarize "new" members of the mitigation community with all of the appropriate regulatory documentation required to effectively develop applications for funds. To the credit of all who have been involved this interaction has resulted in the generation of 72 requests for Hazard Mitigation Grant Funds, more than twice the total amount of applications received in six previous disaster declarations. This link with the COGs was achieved in large part through contacts established with the State Public Policy Group as well as the Iowa Department of Economic Development.

The Section 409 Plan is the states' overall mitigation plan that addresses the variety of disasters that might impact either the people or the infrastructure of the state. This plan helps to identify known as well as suspected hazards and should be prepared from a realistic perspective prior to disaster occurrence. However, the very nature of disasters makes them difficult to both predict and prepare for. Subsequently, the Section 409 Plan is updated immediately following a Presidential Disaster Declaration while the specific hazards, and methods to either eliminate them or reduce their effects, are still fresh in the minds of the affected people and communities. Iowa's Section 409 Plan had endured a great deal of stress with the number of disasters that the state has endured within the last 5 years. The response and recovery phases of disaster preparedness seemed to have only temporarily subsided prior to an additional declaration being made. While the nature of the risk, acknowledgement of the threat and awareness of the need were at the forefront of the minds of IEMD staff, efforts to write about the need to identify and plan to reduce risk and prevent disaster related damages were not immediate priorities.

Given the widespread impact the floods had on the entire state, revision of the Section 409 Plan was identified as a monumental task. IEMD engaged the services of the State Public Policy Group (SPPG) in an effort to develop a "model" Hazard Mitigation Plan that will benefit all Iowans. Given the task of hazard identification, plan conceptualization, development and implementation, SPPG set a course involving a wide variety of state and local officials in the identification and planning process. Focus groups are being organized to assist with plan development discussions. A core group composed of members of the larger focus groups will provide guidance related to specific development of the plan as it evolves. The plan will be revised and implemented by July 15, 1994 and is expected to carefully address all of the hazards and appropriate mitigation efforts associated with life in Iowa.

Milestones

As a result of this disaster, FEMA and state hazard mitigation personnel will administer approximately \$31 million to reduce hazards associated with flooding. That effort is primarily oriented at elevation, relocation or acquisition of flood prone homes throughout Iowa. A variety of funding sources have been brought to bear to finance mitigation measures. Hazard Mitigation Grant Program funds are regularly being matched with Community Development Block Grant Funds to finance projects for applicant communities.

Outreach efforts and other means of "potential" applicant notification have resulted in the receipt of 72 completed applications and an additional 52 expressions of interest for Hazard Mitigation Grant Program funds. The completed applications account for over \$50 million of total mitigation expenditures. Project emphasis is oriented primarily at various type of housing issues. The most important aspect of Iowa's Hazard Mitigation revolves around moving people who presently reside on the "floodplain" to areas where they are less likely to suffer repeated damages caused by flooding. To that end, 37 applicants, representing approximately 1000 homes have requested financial assistance from the Hazard Mitigation Grant Program. Elevating, purchase and demolition or relocating homes to higher ground will account for \$24 million in hazard mitigation expenditures for a total project cost of \$32 million.

Iowa set the pace, nationally, with regard to plans to assist homeowners "voluntarily" leave floodplains. The City of Des Moines was the first community in the nine midwestern states affected by 1993's massive flooding to develop, implement and purchase a flood damaged property. That historic purchase, December 21, 1993, marked the midpoint of a property acquisition policy development effort between FEMA and Iowa Hazard Mitigation Staff that culminated in establishing "new national policy" for the purchase of flood damaged properties. A conference held in Davenport and designed to assist applicants from Iowa and surrounding states become familiar with property acquisition processes solidified, in late January, the state's effort to obtain FEMA's approval of the procedures.

IV. AREAS OF EXCELLENCE

- A. Execution of the State Multi-Hazard Plan in response to the floods of 1993.
- B. Organization of the Disaster Field Office and Disaster Application Centers.
- C. Coordination of state agencies with the federal and local agencies during the 24-hour operation of the State Emergency Operations Center and securing resources for affected jurisdictions.
- D. Funding for various programs are estimated as follows:

<u>Program (As of April 30, 1994)</u>	<u>Millions</u>
Public Assistance Program	100
Federal Response	20
Individual Assistance Program	42
Disaster Unemployment Assistance	38
Crisis Counseling	4
Small Business Administration (loans)*	102
Community Development Block Grants	107
Agriculture Programs	650
Economic Development Agency	60
Unmet Needs	11

404 (Hazard Mitigation)	31
Corps of Engineers	7
Soil Conservation Service	3
*Loans, not grants	
	<hr/>
TOTAL	\$1,175,000,000

V. PROBLEMS/ISSUES

A. Items of concern in State EOC operations:

* Inadequate space in the State EOC. This problem will be solved with the newly constructed State Area Command (STARC) facility. A new state of the art EOC has been included as a major portion of this facility.

* The control of information flowing through the EOC was also considered a problem. This also should be resolved with the new EOC in conjunction with redefining the process at the EOC in the Hoover State Office Building.

* Scheduling of EOC personnel should be held to eight hour shifts to avoid burn out.

* Scheduling and development of situation reports by all agencies should be done promptly and maintained.

* Continuity with other agencies should be well planned and tested to assure assistance in areas such as clerical for 24-hour work availability. Specific to emergency management, these people should have basic knowledge of emergency management to better facilitate the screening of calls for requests, etc.

* Stress the importance of briefings for shift changes.

* Continuous and precise agency logs. This is being addressed in the new facility with new and improved message tracking planned.

* Assure throughout the event, no matter how long it continues, that public affairs personnel are available 24-hour daily to properly screen media requests.

* Do not hesitate calling and accepting qualified state assistance from counterparts in other agencies. Especially states that have experienced similar events.

* Design, establish, review and test resource management plans regularly.

* Need increased computer capability and improved communications networking for message control and access to key personnel.

B. Areas of concern in Public Assistance management:

* Public assistance officers were hired on a temporary basis, which required a period of training necessary for effective administration. Exploring the possibility of training full time staff for Public Assistance positions. This would enable staffing to be 100% from the day of the declaration. However, ideally, if FEMA would fund a portion of our Public Assistance positions, this would enable the state to have a pool of trained individuals available on a continuous basis solely dedicated to handling FEMA programs on the state level.

* County coordinators can aid in applicant outreach and take a pro-active stance with applicants. This includes assisting with PA briefings and preliminary damage assessment tabulation.

* State inspectors who are part of the FEMA inspection team, should collect required forms from the applicants at the time of the inspection.

* FEMA should develop a process by which information is down loaded from their program directly into the state database. This would allow the state to utilize time for other areas of public assistance processing and payments.

C. Areas of concern in the Hazard Mitigation Grant Program:

* Both the Hazard Mitigation Plan (Section 409 Plan) and the Hazard Mitigation Administrative Plan (Section 404 Plan) require regular update, on an annual basis.

* Project selection criteria and prioritization must be specifically established prior to disaster declaration. Then, early in the disaster, refinement of the criteria and project selection priority can occur correlated with the specific type of disaster.

* Staff requirements must be regularly evaluated after disaster declaration to ensure that qualified personnel are available to assist with applicant needs. A more informative system for potential applicant notification should be developed.

* Coordination among all sources of funding improves the ability of the state to both identify and fund mitigation efforts.

* To be more prepared in the future, regular staff should be trained and permanent assignments made in order to continue Hazard Mitigation in a proactive manner.

D. The entire disaster assistance application process involves a great deal of cumbersome paperwork for the applicants. Each federal agency should review their requirements.

E. Ensure that Disaster Field Offices are co-located in the same city with state government operations and reflect the state's requirements when determining location.

F. Individual departmental attitude toward long-term EOC operations varied greatly compared to that shown during past operational training exercises. This may have been as a result of the length of the response and departmental preparation to endure such a long-term commitment. Suggest, at least once

every two or three years, a fullscale exercise be conducted covering at least a 24-hour duration of time.

G. Representatives from individual agencies sent to represent that agency in the State EOC should be granted the authority by that agency to make appropriate decisions. The need for agency representatives to continually check with higher level management for final decisions is disruptive to EOC operations.

H. The physical presence of a FEMA staff person involved in the Radiological Energy Response Program, is needed to work issues that may arise with respect to the Commercial Nuclear Facility Regulatory Program.

IOWA DEPARTMENT OF PUBLIC HEALTH

FLOOD DISASTER AFTER ACTION REPORT

I. AREAS OF RESPONSIBILITY

Statewide Public Health

II. ORGANIZATION DURING EMERGENCY OPERATIONS

The Iowa Department of Public Health (IDPH), in cooperation with other departments, maintained a 24-hour schedule of professional staff at the State Emergency Operations Center (EOC) which responded to the public health needs of affected individuals and organizations.

III. SUMMARY OF EMERGENCY OPERATIONS

A. DISASTER RESPONSE PHASE

The Iowa Department of Public Health submitted a grant application to the Centers for Disease Control and Prevention (CDC) for financial and technical assistance for activities during the emergency response period. A weekly statewide assessment of Iowa's 99 counties was helpful in the identification of public health problems and targeting of resources where needed. During the emergency response period, IDPH received approval by CDC of eight Stafford Disaster Relief Requests. These requests (list follows) were included in the Stafford Act grant to CDC. IDPH received \$742,874 in direct financial support plus \$377,763 in technical support and resources from CDC. The cooperative period is for a 12-month period, beginning October 22, 1993.

1. Assessment teams for identification of public health problems and establishment of appropriate surveillance and evaluation.
2. Additional \$150,000 added to #1 for completion.
3. Augment statewide public health surveillance during emergency phase by implementation of statewide computer system (one per county).
4. Production and distribution of flood-related public health information.
5. Water analysis and sampling at 80 potable water distribution centers and Des Moines water system once recharged. Also allows for evaluation and assistance with monitoring rural wells.
6. Organic chemistry and pesticide analysis plus statewide collection/analysis of private wells to assure safe drinking water and encephalitis surveillance/100 pools statewide.
7. Six-month direct support, vector control analysis, quality of water sampling and analysis, and environmental health assessment.

8. Assignment of Public Health Advisor to assist Iowa Department of Public Health conduct statewide assessment/follow-up of TB patients displaced (residence) by floods.

B. DISASTER RECOVERY PHASE

The IDPH also included within its grant application to CDC a flood recovery response component, and has received \$2,828,460 to support the following activities during the next 12 months.

1. Active Surveillance Activities

a. Develop an active surveillance program for flood related diseases in counties most affected by the flooding within 45 days of hiring the project appointment. Counties will be determined utilizing data collected by the ongoing biweekly county survey and those counties within Iowa's flood plains.

b. Expand current communicable disease surveillance activities to emergency rooms, outpatient clinics, and laboratories within 90 days of project appointee being hired.

c. Develop electronic transmittal of surveillance data from 27 hospitals located in the designated area to the Department of Public Health and county health departments simultaneously within nine months of project appointee.

2. Flood Emergency Surveillance Network

a. Establish a statewide electronic public health communication system linking all county public health agencies and other interested public health agencies to the Iowa Department of Public Health by October 20, 1994.

b. Training shall be completed by October 30, 1993 for all the users of the Department's electronic communication system so that each user can respond within established time frames to assure that all reports arrive at the Department.

c. The Iowa Department of Public Health shall expand the usage of the public health electronic communication system throughout the state and integrate all flood related public health programs by the end of October 1994.

3. Fluoridation Repair Activities

Flood related activities significantly interrupted Iowa's on-site inspection of each community fluoridation system. The Department will regain currency on its inspection cycle for fluoridation system in Iowa during the next 12 month period.

4. Mosquito - Encephalitis Virus Surveillance Prevention of the transmission of mosquito-borne viruses to citizens of Iowa during the 1994 arbovirus season will be accomplished by:

a. A contract with Iowa State University (ISU) will be finalized by May 1994. Adult mosquito monitoring will be done by operating three New Jersey light traps in eight cities in Iowa, specifically: Davenport, Dubuque, Ames, Des Moines, Waterloo, Cedar Rapids, Council Bluffs and Sioux City. Daily

catches will be processed and evaluated by the Iowa State University contractor with results promptly forwarded to the Iowa Department of Public Health.

b. The contractor will establish an ongoing collection of mosquitoes using CO₂ baited CDC traps. Pooled mosquitoes will be submitted to a second contractor, the University Hygienic Laboratory (UHL) for virus isolation or viral identification techniques e.g. antigen capture. The distribution of the trapping network will be precisely recorded for analysis and to ensure that no large significant area of the state is omitted from mosquito collection and assessment. Areas of historic flooding and large populations will be given priority in surveys.

c. The contractor will monitor arbovirus in avian host species through emplacement of nine sentinel flocks of chickens in diverse but representative regions of Iowa. Flocks will consist of 12 young seronegative birds that will be identified by bands and bled weekly for SLE/WEE serology. Any seroconversion will be noted, reported and called for intensified mosquito trapping in the area.

d. Beginning May 1994, accumulated data from surveillance studies and human/equine morbidity figures will be reviewed and summarized to include conclusions and recommendations if any, to address mosquito problems. These interim reports will be entered on the WONDER system for all local health departments, statewide interest groups, CDC, other states, and national groups.

e. The contractor and the IDPH will conduct a spring briefing at Iowa Public Health Association, May 4, 1994 on the nature of potential mosquito problems and options for control measures. Community control techniques, area control measures, and statewide emergency spraying will be reviewed. Special training in this area will be scheduled through the Agriculture Department.

Evaluation of stated objective: Successful realization of these objectives will be prevention of any cases of human SLE-WEE in the state of Iowa. Interim success will be defined as occurrence of human cases after risk of virus transmission has been identified and publicized coupled with advisories to protect citizens plus initiation of community abatement measures.

5. Public Information and Communication

Inform, educate and motivate target segments by implementing a multi-faceted informational campaign that responds to current and anticipated public health information needs associated with the floods of 1993 in Iowa.

6. Hypertension and Stress

50% of the population identified as at risk for flood-related hypertension at initial screening programs will be referred for further evaluation by a health professional by the end of the grant year.

7. Contamination and Prevention

a. Address the need for childhood lead poisoning prevention activities in flooded areas and increase Iowa's total program efforts by making two to four awards of one-time funding to local health departments in areas impacted by flooding to provide Childhood Lead Poisoning Prevention Program (CLPPP) activities in their service areas.

b. Respond to the need for continued technical assistance to local health departments and to individual homeowners in evaluating flood damaged private wells and septic systems.

c. Provide training to local boards of health and county sanitarians to improve their capabilities to respond to emergencies involving damage to private wells and septic systems in the future.

8. Water Wells Surveillance

To analyze private water well and vector specimen to determine risk of disease to Iowans.

a. Arbovirus Surveillance -- Specimens will be sent to the University of Iowa Hygienic Laboratory for mosquito and arbovirus analysis throughout the year. Reports will be forwarded to the Department for monitoring and action if indicated.

b. Private Water Surveillance -- Specimens will be sent to the University of Iowa Hygienic Laboratory for analysis of water collected from private wells throughout the year. Test results will be sent to the site collected at as well as IDPH. The department will monitor results statewide to determine problem areas and work with local health agencies to correct the problem.

IV. AREAS OF EXCELLENCE

Statewide public health activities that include disease surveillance, vector surveillance, environmental concerns related to private water, sewage and medical, and public health information.

The ability to react to potential public health problems immediately and to work with the different state departments and local health agencies.

V. PROBLEMS/ISSUES

The roles and responsibilities of FEMA and the lead agencies under the Stafford Act protocol should be clarified. During the Iowa response, officials from the US Department of Health and Human Services assessed the flood impact on Iowa substance abuse agencies and recommended that 27 counsellors be assigned to Iowa. The US Veterans Administration had these professionals available. However, FEMA involvement effectively cancelled this federal recommendation. First, the regional FEMA coordinator said substance abuse was not a Stafford eligible service. This opinion was reversed on appeal to Washington. Then, the assignment was bureaucratically delayed until the emergency nature of the service was effectively over.

In another instance, at a St. Louis meeting of the nine affected states, the FEMA representative challenged an Illinois health professional on the need for additional funding for disease surveillance, suggesting that surveillance was a routine activity of health agencies and consequently should not be covered. It was pointed out that increased surveillance is specifically approved in the Federal Emergency Response Plan. However, the need for such a rebuttal demonstrates that some FEMA officials viewed themselves as overall program directors rather than emergency response facilitators.

FEMA's role should be the assurance of an appropriate federal response. This would include providing for an appropriate assessment, identification of resources, and assurance that audit procedures are implemented. FEMA should not presume to conduct assessments within the responsibilities of the various ESF lead agencies. For example, FEMA should ensure appropriate Department of Health and Human Services involvement in ESF #8 activities. However, FEMA should not overrule programmatic recommendations of HHS to the states.

IOWA DEPARTMENT OF PUBLIC SAFETY

FLOOD DISASTER AFTER ACTION REPORT

I. AREAS OF RESPONSIBILITY

Law enforcement and coordination of emergency services, including staffing of Emergency Operations Center, security, traffic enforcement and routing, provision of some emergency transportation, code enforcement, and anti-arson and explosives efforts.

II. ORGANIZATION DURING EMERGENCY OPERATIONS

Normal departmental organization was used throughout the disaster.

III. SUMMARY OF EMERGENCY OPERATIONS

Management personnel assigned to the Emergency Operations Center.

Identified flooded roads and provided and coordinated traffic control in areas requiring detours.

State Patrol communications personnel provided continuous radio and telephone links between and among officers and officials working on flood response and recovery.

Personnel assisted in sandbagging and water distribution operations.

Uniformed peace officers (state troopers) provided security at food stamp distribution sites.

Fire Marshal personnel responded to a report of an explosive device and successfully disarmed the device found on a levee near Clinton.

Inspections of state buildings in the Des Moines area, including the Capitol Complex, to reduce fire hazards and assist with evacuation plans, were carried out while water service was out.

Fire Marshal personnel identified fire departments which suffered flood-related damage and assisted with referrals for loaned and replacement equipment.

Prepared news releases and responded to inquiries from the public regarding flood-related electrical and fire hazards from electrical and gas appliances, and occupancy of unsprinklered and unairconditioned buildings without toilet facilities.

IV. AREAS OF EXCELLENCE

Assignment of management personnel to the Emergency Operations Center went smoothly.

Innovative solutions to some problems were devised. For example, yellow "Police Line Do Not Cross" tape was utilized to close flooded roads or ramps until Department of Transportation personnel could arrive with signs and barricades. In another case, a cellular telephone was used when a communications center went out of service because of flooding until a communications van arrived.

Generally, cooperation among agencies working on flood response and recovery was noteworthy for willingness to be flexible in order to accomplish response and recovery objectives. Also exceptional was the willingness of employees of various agencies to respond and to work long hours, often away from home, in order to meet the various challenges faced. Volunteer fire departments provided assistance with traffic control on flooded roads.

V. PROBLEMS/ISSUES

Insufficient alternate routes were available for traffic diverted from flooded highways, particularly I-380 between Iowa City and Cedar Rapids.

State Patrol Post phone lines were saturated at times with calls requesting information about road conditions and other flood-related matters, in spite of intensive media coverage of these issues and a constant stream of information being provided to the media.

Uniform recordkeeping for personnel and other data related to the emergency was needed.

Some lack of coordination and agreement between the State Patrol and DOT on need for road closings and efforts at preventative flood control was noted. Also, some delays were noted on selection of detour routes after road closings.

A lack of available signage for alternate routes for closed roads was noted.

A review of staffing needs of the Emergency Operations Center is needed.

Cellular telephones should be provided as a backup means of communications in the event that radio and telephone communications facilities become flooded or lose power for lengthy periods of time. This was done in some cases and should be a regular feature of disaster response.

In view of personnel demands on peace officers, consideration should be given to providing security at locations such as food stamp distribution sites with personnel other than state troopers.

IOWA DEPARTMENT OF REVENUE AND FINANCE

FLOOD DISASTER AFTER ACTION REPORT

I. AREAS OF RESPONSIBILITY.

State Tax Administration

State Accounting functions, specifically involved were payment of claims.

II. ORGANIZATION DURING EMERGENCY OPERATIONS.

None beyond normal operating procedures.

III. SUMMARY OF EMERGENCY OPERATIONS.

Taxpayer Services assisted in the following ways:

- * Provided volunteers who helped other agencies as needed in flood assistance.
- * Provided phone and walk-in assistance for tax matters and general questions.
- * Participated in the "Unmet Needs Committee" as a resource. Attended 3 meetings of the group.
- * Prepared a tax information flyer.
- * Coordinated responses with the IRS as part of partnership.
- * Sent information to the ISCPA, Soybean Association, and H & R Block for their newsletters.
- * Provided Taxpayer Service Specialists at FEMA sites and other meetings.
- * Responded to media requests for information.
- * Included flood tax information in various newsletters and ERIN.
- * Included flood information on cover and instructions of 1993 tax booklets.
- * Sent out press release of department flood provisions.

The department also provided numerous employees for water distribution activities during the flood crisis. Additionally, one full-time employee was loaned to the Department of Public Defense for an unspecified period to assist in recovery efforts.

Considerable time was spent by a management analyst in our Information and Management Services Division in developing an understanding of the sources of information that would be available for the analysis of the impact and subsequently, the actual estimate of the flood impact on state tax revenues. This work will continue throughout the year as more information becomes available.

The Accounting Bureau has processed all flood claims within one day since a peak workload on November 5th. The Bureau set up and processed a fund for acceptance of donated cash and checks in coordination with the Governor's Office.

IV. AREAS OF EXCELLENCE

Received numerous calls/claims from departments wanting to purchase flood related supplies. Received excellent service/communication from the Department of General Services-Property Management Division in determining the allowability of these expenses.

V. PROBLEMS/ISSUES

- * Funding problems in the early stages of repayment.
- * Coordination of prompt payment issue.
- * Timely release of warrants.
- * Lack of internal coordination within DHS. Received calls from throughout the department on the treatment of contractual services even though one person in DHS had been designated to deal with the issue. Referred the calls to the internal DHS coordinator.

STATE BOARD OF REGENTS

FLOOD DISASTER AFTER ACTION REPORT

I. AREAS OF RESPONSIBILITY

The State Board of Regents is authorized under Iowa Code to manage and control property belonging to the Regent institutions -- the University of Iowa, Iowa State University, the University of Northern Iowa, Iowa School for the Deaf, and the Iowa Braille and Sight Saving School.

The State Hygienic Laboratory, a part of the University of Iowa, is responsible for providing laboratory, diagnostic and surveillance services to determine health hazards under the Iowa Emergency Multi-Hazard Plan. A separate report regarding response and recovery activities of the State Hygienic Laboratory is attached.

II. ORGANIZATION DURING EMERGENCY OPERATIONS

At the University of Iowa and Iowa State University formal emergency and disaster response programs were activated and emergency operations centers (EOC) were established. Key administrators and personnel were identified; they held daily meetings. These members were responsible for centralized coordinating, monitoring and directing of their subordinate organizations during the emergency.

The University of Iowa activated its Emergency Preparedness Plan, assigned key personnel to the Administrative Response Team, and established an Emergency Operations Center in Jessup Hall. Activity groups were responsible for issues related to accessibility, evacuation and relocation, safety and health, transportation, property protection, utility operations, public relations, and various recovery activities.

Iowa State University established an Operations Command Center at its Public Safety dispatch office. It was staffed by directors of key departments.

At the University of Northern Iowa, the heavy rains of July 8, 1993 which resulted in large amounts of surface runoff, were handled by the university staff on duty at the time; no special emergency organization was necessary. At the Iowa School for the Deaf and the Iowa Braille and Sight Saving School storm damage cleanup (such as downed trees) was handled by maintenance crews.

III. SUMMARY OF EMERGENCY OPERATIONS

A. DISASTER RESPONSE PHASE

Communication

Daily or frequent communication was maintained by the universities with local authorities. The University of Iowa held daily conference calls with the US Army Corps of Engineers regarding conditions at the Coralville Dam. Iowa State University maintained close communication with the City of Ames.

Evacuation/Rescue/Security Operations

Emergency evacuation and rescue assistance, building security/monitoring, and pedestrian and traffic control were provided by the institutions' departments of public safety.

Response and Prevention

Maintenance personnel and other institutional staff performed various tasks, including sandbagging (emergency and preventive) around susceptible facilities, installing emergency pumps and generators, building temporary earthen dikes, and moving property to higher ground.

As needed, staff assignments were reorganized to support emergency efforts.

At the University of Iowa a contingency plan for prioritizing water use was developed. It was to be used if water supplies were severely restricted.

At Iowa State University river readings were taken every 15 minutes and relayed to the EOC. Weather and rainfall amounts were monitored to forecast impact.

Activities were relocated, rescheduled or cancelled on a case-by-case basis.

B. DISASTER RECOVERY PHASE

Damage assessment and operational recovery meetings were held frequently to determine priorities, labor, and material needs and to coordinate assignments. Personnel at the institutions' physical plants, facilities planning departments, residence systems and other departments participated in recovery teams. They determined priorities, or facilitated damage repair and safe re-occupancy based on operating and academic priorities.

IV. AREAS OF EXCELLENCE

The response to the flood disaster at each of the institutions was truly exceptional. The cooperation, planning, and response efforts by all involved on each campus is indicative of the exceptional dedication and commitment of the universities' staff. They responded to immediate events as well as to the extended crises, working long hours in adverse conditions. The cooperation and support of the employees' union should also be recognized.

At the University of Iowa, a creative alternative Water Plant Intake System was developed to ensure a continuing supply of water. The University also established a centralized "Hot Line" phone bank to facilitate communication regarding flood conditions, classes and activity schedules, and to answer or refer specific questions from students, parents, staff, media and the general public.

At Iowa State University, the cooperation of departments and among individuals at different management levels resulted in creative and workable solutions to problems. Cooperation with the City of Ames was also cited. There was a sharing of supplies and resources during the disaster.

V. PROBLEMS/ISSUES

Iowa State University - Communications

Story County lacks a single, emergency radio or emergency communications system for centralized use by local authorities. Establishment of an 800 trunked communication radio system is recommended.

HYGIENIC LABORATORY

FLOOD DISASTER AFTER ACTION REPORT

The Des Moines Division of the Hygienic Laboratory has been located in the State Capitol Complex since 1950. This location, over 100 miles from the laboratory headquarters in Iowa City, provides service to state agencies such as the Iowa Department of Public Health, Iowa Department of Natural Resources (IDNR), and Iowa Bureau of Labor. In addition, this location's proximity to central and western Iowa enhances coverage of the entire state by the state laboratory.

The Des Moines Laboratory proved to be a vital force in the flood recovery efforts in the Des Moines area during the tragic flooding in July 1993. The UHL's staff worked closely with the Des Moines Water Works (DMWW) and the IDNR to bring the Des Moines public water supply system back on line as a safe source of drinking water in a remarkably short period of time.

While DMWW distribution staff began to put together their plans for filling and flushing the system, laboratory staff from the Water Works and the Hygienic Laboratory began preparations for the initial sampling of the system, referred to as Phase I. The city had been divided into a grid of 98 one mile squares. From each of these squares four samples for bacterial analyses, one sample for turbidity analysis, and one sample for chlorine residual were to be collected. In addition, nine grids were selected at random to be sampled for the presence of organics.

With the Phase I monitoring out of the way and no compelling evidence of serious contamination of the system, the UHL began thinking about Phase II monitoring. This monitoring scheme was designed to determine whether or not the system could be used for drinking water.

The City of Des Moines, like all other public drinking water systems, had a routine drinking water sampling network in place. This is a series of locations where routine samples are periodically collected. The locations were representative of the distribution system within five quadrant areas of the city. In total, 142 locations make up the network. Staff from the DMWW together with UHL and IDNR decided that samples should be collected from each of these locations, and in addition, half again as many samples should be collected from dead ends within each of the quadrants. Two samples would be collected at each sampling point; one for bacterial analysis and one for chlorine residual. To get the job done, IDNR brought staff into Des Moines from other regions of the state. IDNR staff together with UHL staff fanned across the city to collect samples.

While the Des Moines Water Works was flooded, the Hygienic Laboratory received numerous samples for drinking water analysis. These samples came from a variety of sources including; hospitals, military reverse osmosis units, private wells, municipal water supplies and private businesses.

The Hygienic Laboratory received its first hospital samples on July 12, the day after the Des Moines Waterworks Plant was flooded. Military reverse osmosis water purification units (ROWPU) set up at the hospitals began sending samples to the Hygienic Laboratory on July 13th.

To check this water the military collected samples for drinking water bacterial analysis from raw water and water following the treatment process. The University Hygienic Laboratory analyzed these samples using the recently approved Colilert Presence/Absence methods and reported the results back to the military units and the Iowa Department of Public Health the following day. Water was pumped from holding bags/bladders into the hospitals where samples for drinking water bacterial analysis were taken by the hospital staff at faucets and drinking fountains. This process ensured that the hospital water system was not contaminated. This water was used for drinking purposes once it was found to be free of coliform bacteria for a 2 to 3 day period, as determined by the Iowa Department of Public Health.

Seven hundred forty six samples were received at the Des Moines Branch Laboratory from hospitals during the drinking water crisis. During this same period, the military delivered an additional 88 samples.

While UHL staff worked on the City of Des Moines, the laboratory's Limnology staff was in the field investigating water quality in Iowa's surface waters. Concern about nitrate and pesticide contamination in surface waters used for emergency sources of drinking water prompted Limnology staff to collect water samples from several rivers (Raccoon River, Des Moines River, Skunk River, Cedar River, and Iowa River). In response to concerns over the deposition of an oily substance left on vegetation by receding floodwater near the UHL's Neonatal Screening Laboratory, Limnology staff also collected vegetation samples.

To assess the residual impact of the flood on water quality across the state, the majority of the routine monthly surface water monitoring sites were sampled (after the flood) in the latter part of July and again in August. The quarterly surface water quality monitoring sites were also sampled as soon as possible after the flood and samples were all collected by early August. In addition to the monthly and quarterly sampling sites, samples were collected downstream of selected urban areas (Ames, Anamosa, Cedar Rapids, Cherokee, Council Bluffs, Davenport, Denison, Hamburg, Keokuk, and Ottumwa) and analyzed for the common agricultural herbicides (Atrazine, Bladex, Dual, Lasso, Senco, Treflan, and Sutan), fecal coliform bacteria and other common water quality analytes (i.e. c-BOD, DO, pH, NH₃-N etc.).

In an effort to determine if flood waters affected other water supplies in the state, samples were collected from 3 of the 15 water supply lakes/reservoirs that were studied during the winter of 1993. Samples of raw and finished water were collected from Big Spirit Lake, Twelve Mile Lake, and Fairfield reservoirs No 1 and 2.

The swollen Des Moines River reached to within inches of the back door at our Neonatal Screening Laboratory located a few blocks from the Capitol Complex. A late night sandbagging effort spared the Neonatal Screening Laboratory. The threat of additional rain and overloaded storm sewers challenged the continued operations of this laboratory. Flooded streets permitted only limited access to the laboratory. Empty oil and solvent barrels from a nearby industrial area floated aimlessly through the streets, causing the evacuation of the Neonatal Laboratory on two occasions due to toxic fumes.

Our operations were vital to the recovering community as we were the only fully operational public health laboratory in the immediate area. We were expected to test the drinking water being delivered to the area, test the hospital water treatment systems during this crisis and provide the Des Moines Water Plant Laboratory a place to perform laboratory testing as the system began to recover. Daily laboratory analysis was necessary to insure the military water treatment units were providing usable water. Private well owners, flood processing facilities, nursing homes and smaller public water systems that needed

laboratory services were provided by the UHL. We also provided considerable professional advice and public information to the surrounding communities through interviews, open meetings and technical literature.

In order to maintain operational facilities, several plans initiated on July 12th. Testing media, gallons of distilled water and other resupply items were transported daily from our laboratory in Iowa City. In addition, several staff members from the Iowa City laboratory made daily treks to assist the Des Moines laboratory with new additional tasks. This resupply effort was challenged several times over the next several days as road closings and flood recovery construction often extended a normal two hour trip into a full day of travel.

Despite the primitive working conditions and the increased work load, the Des Moines laboratory staff continued to provide testing services to our clients. Restrictions were placed on the use of electricity for several days resulting in only essential use. Purchased compressed air tanks and portable vacuum pumps were used until these services were restored. In spite of everything, the UHL remained fully operational and more than met the needs of Iowans during the crisis.

IOWA STATE UNIVERSITY EXTENSION

FLOOD DISASTER AFTER ACTION REPORT

I. AREAS OF RESPONSIBILITY

ISUE provided initial information and needs assessments. Information and education are also being provided for long term recovery. Topics Extension handled initially included: safety, coordination (with other agencies), and clean-up facts. Current education/information includes financial concerns, stress management, production agriculture, and planning for individuals, businesses and communities.

II. ORGANIZATION DURING EMERGENCY OPERATIONS

ISUE did not need to make organizational changes to respond. ISUE has offices and staff in every county as well as staff at Iowa State University. All staff provided information/education to media and to individuals. The Iowa Concern Hotline provided a single 800 number to help people learn about disaster recovery agencies and their programs. The hotline also provided extension information/education and stress counseling and referrals. Extension's existing communications system (computer network, weekly mailings to all counties) gets information out across the state quickly.

III. SUMMARY OF EMERGENCY OPERATIONS

A. DISASTER RESPONSE PHASE

Extension administrators declared flood response a top priority for all staff. Two formal needs assessment teams were in Lee and Fremont Counties. Staff in each county provided needs assessment information on an on-going basis. Extension staff helped connect victims with needed services. For example, in at least one case, they helped a livestock producer find another producer willing to take his flooded out hogs temporarily. Some staff went door to door in flooded areas distributing clean-up information and safety information (e.g. electrical, structural, food). Much extension information was provided to Iowans through mass media contacts. These media contacts included newspaper, radio, television (regular programming and call-in shows) and satellite uplinks.

B. DISASTER RECOVERY PHASE

Long term education is being provided on stress management, financial management (personal, business, agriculture), production agriculture problems, and community planning issues. This is being done one-on-one, in small groups, in group meetings, with printed materials, with instructional videotapes, with satellite uplinks, and through mass media. Special federal funding has been provided through June 30, 1994 to provide eight coordinating centers for extension recovery efforts. For these centers and the staff attached to them, flood recovery continues to be a top priority. Additional program associates have been hired to provide specific financial and farm management information.

IV. AREAS OF EXCELLENCE

A. TOPIC: Provide fast response.

DISCUSSION: When a natural disaster occurs staff can respond quickly with the needed information because ISUE has a presence in each county and has information and organizational networks already developed. We can provide help where the disaster occurs.

B. TOPIC: Provide needed information

DISCUSSION: Extension provides factual, specific, appropriate, down-to-earth information that Iowans need. ISUE has the research-based, unbiased resources of the University to provide.

V. PROBLEMS/ISSUES

A. TOPIC: Coordination of efforts

DISCUSSION: Iowa needs better coordination and awareness of what is possible and what is being provided. Information on how agencies can/do work together is needed (who else is involved and how). This working together appeared to happen better at the local level. There is a perceived lack of coordination beyond the local level.

B. TOPIC: Staff Stress

DISCUSSION: Staff worked a lot of hours. This is an internal issue ISUE needs to be supportive of staff and recognize that disaster work has top priority and other routine things will not get done for a while.

C. TOPIC: Needs Remaining

DISCUSSION: Many Iowans are still dealing with flood and weather related problems. For example, farmers are discovering what harvest has brought in, some businesses are working with cash flow problems, and some families still have major repairs to do, and possibly no heat. Information and education are still needed.

IOWA COLLEGE STUDENT AID COMMISSION

FLOOD DISASTER AFTER ACTION REPORT

I. AREAS OF RESPONSIBILITY

The Iowa College Student Aid Commission (ICSAC) provides a broad range of services to Iowa postsecondary students, parents, and institutions. These services include administration of student financing, information services, research, and program evaluation. During and after the 1993 Iowa floods, staff supported these constituencies by coordinating higher education relief efforts.

Input from Iowa college and university students and financial aid directors called for assistance to students whose incomes were disrupted by the flooding, along with those who suffered substantial property damage. Without assistance, these students likely would have had to delay education plans. Disaster recovery efforts continue at this time and are expected to continue for at least another year, as experience in Florida and Hawaii demonstrated that higher education needs often peak in the school year following most natural disasters.

II. ORGANIZATION DURING EMERGENCY OPERATIONS

The Iowa College Student Aid Commission continued to conduct business during the emergency; and, while the loss of public services seriously impeded productivity, all essential services remained available to constituents. Commission offices also served as an alternate site for the Iowa Student Loan Liquidity Corporation (ISLLC), as its downtown building was closed to all personnel. USA Funds, the Commission's computer service bureau, moved operations to a West Des Moines facility for a short time and continued to supply satisfactory service.

III. SUMMARY OF EMERGENCY OPERATIONS

The ICSAC developed an action plan designed to maximize federal student assistance and expedite delivery of emergency resources to those impacted by the flood. College and university representatives helped develop a formula to estimate the number of students and the amount of assistance which would be needed for Iowa students. Staff then negotiated with the US Department of Education for authority to conduct a statewide survey of need to replace individual campus request letters. The survey was developed with the help of the Commission's Advisory Council for State Student Aid Programs and conducted in September. Copies of the survey instrument and a response summary are available from ICSAC.

Fifty-eight institutions identified needs totalling \$16.6 million for nearly 14,000 students. These results were forwarded to the US Department of Education, and flood relief allocations were announced on October 25. Campus based funds, which had been reverted by institutions throughout the United States, were used to fund the allocations - a method used by the federal Department of Education in recent

hurricane disasters. Iowa institutions received \$11.1 million (53.5 percent) of the total \$20.9 million awarded to institutions in ten states. The availability of the federal aid was announced through a series of news releases sent to Iowa radio stations, newspapers, student newspapers, and financial aid administrators.

ICSAC also sought administrative and regulatory relief for Iowa institutions. Specific requests directed to the US Assistant Secretary of Education for Postsecondary Education included:

- * Request for federal emergency funding for the Supplemental Education Opportunity Grant (SEOG) Program - Granted

- * Waiver of the matching provisions for the SEOG Program - Denied

- * Allowance for broad use of professional judgement in calculating need for students and their families - Granted

- * Waiver of the 30-day delayed disbursement rule for borrowers adversely affected by the flood - Denied

- * Authority to grant interest subsidies to Stafford Loan recipients who, after receiving Unsubsidized Stafford Loans, became eligible for need-based benefits - Granted

The Assistant Secretary responded to these requests on November 1, 1993. A copy of that response, which was distributed to all Iowa financial aid administrators, is available upon request.

A second letter sent to the Assistant Secretary on December 10, 1993 sought additional relief in the following areas:

- * Opportunity to apply for SEOG funds for the 1994-95 school year - Denied

- * Authority to shift 1993-94 school year allocations among campus-based programs - Federal SEOG to Federal Work-Study - Denied - others clarified.

- * Authority for Iowa colleges and universities to transfer a portion of 1993-94 school-year allocations from one institution to another - Provided Return and Reallocation Process in Lieu of the Authority.

- * Support for legislation giving authority to use allocations through the 1994-95 school year - Denied

- * Clarification of carry-forward allowance - Granted

- * Waiver of all underutilization penalties - Granted

Copies of ICSAC's letter and the response were provided to school financial aid administrators and other officials on January 13, 1994 along with a comprehensive summary of all flood relief activities. Iowa financial aid officials also had an opportunity to discuss these efforts with the Assistant Secretary during an Iowa Communications Network (ICN) workshop conducted in January, 1994.

IV. AREAS OF EXCELLENCE

ICSAC was fortunate to have the complete cooperation of many colleagues and organizations as the flood emergency unfolded, including support and encouragement from Commissioners, the Board of Regents, the Iowa Association of Independent Colleges and Universities, the Iowa Department of Education, and the Commission's Advisory Council. Many Iowa college and university financial aid administrators and other campus officials enhanced the state's success in receiving funds and clarifying regulatory issues by providing rapid responses to inquiries and the need assessment survey. Finally, the US Department of Education was helpful in providing application guidelines, including the statewide survey coordinated by ICSAC, and for issuing financial and technical assistance in a timely manner.

ICSAC is maintaining communication with the US Department of Education and Iowa institutions and will help facilitate recent federal legislation (amendments to the California earthquake bill advanced by Iowa's congressional delegation and their colleagues from other flood-impacted states) providing carry-over authority and 1994-95 school year assistance. Finally, ICSAC staff will continue to monitor the progress of flood relief efforts while promoting a sufficient federal assistance through the 1994-95 school year.

V. PROBLEMS/ISSUES: None

IOWA DEPARTMENT OF TRANSPORTATION

FLOOD DISASTER AFTER ACTION REPORT

I. AREAS OF RESPONSIBILITY

- * Maintained traffic on the state highway system via detours when necessary to provide a safe, orderly traffic flow.
- * Supported the state response mission with the resources to combat the flooding.
- * Worked closely with the Federal Highway Administration (FHWA) and local authorities to obtain financial assistance for flood damage repairs on city, county, and state routes on the federal-aid highway system.
- * Worked with the Federal Railroad Administration (FRA) and the railroads to obtain financial assistance for repairing railroad damages.
- * Contacted transit agencies, airports, and river terminal facilities to assist them as necessary and provide information about financial assistance. Contacts were also made with the Federal Aviation Administration (FAA) and the Federal Transit Administration (FTA) concerning available assistance programs.

II. ORGANIZATION DURING EMERGENCY OPERATIONS

- * Provided personnel for 24-hour State Emergency Operations Center (EOC) operations.
- * Assistance from other support personnel was provided from their normal office locations.
- * Some normal departmental operations are set up to handle emergencies 24 hours a day, so those operations were automatically implemented.

III. SUMMARY OF EMERGENCY OPERATIONS

Federal-Aid Highway Emergency Relief (ER) Program

Emergency and permanent repairs for all state, county, and city federal-aid routes in Iowa were declared eligible for ER funding. A 10 percent state match was required on the interstate system, with a 20 percent state or local match on all other systems for permanent restoration work. The immediate work done to save the facility or the restore essential traffic was 100 percent federally funded.

Based on a preliminary damage estimate of approximately \$18.5 million in ER-eligible damages statewide, Iowa was allocated \$5 million in FY-93 and \$11,728,000 in FY-94 ER funds. The final reimbursement to the state and local entities is based on actual restoration costs.

The department initiated action and monitored the progress of repairs at approximately 574 sites. These sites include primary, secondary, and urban roads, and bridges. Since our initial damage estimates, more detailed reviews have resulted in repair cost estimates as follows:

State highway/bridge damages	\$7,800,000
Secondary and urban roadway/bridge damages	\$10,500,000
Railroad crossing damages	\$63,000
State traffic control costs	\$505,000

In addition to statewide highway closures and damages, the department conducted its own flood fight to save facilities and equipment from Squaw Creek flooding in the Ames headquarters complex. In addition, other state and local agencies were colocated with DOT operations in Des Moines so the agencies could continue to function. Ames-based staff transported potable water from Ames to Des Moines and staffed distribution points during the Des Moines Water Works shutdown.

Public assistance was provided at numerous locations throughout the state to aid in local flood fights as part of the state resource commitment. Transportation was also provided for food, sandbags, and medical supplies. The department produced flood maps and provided other similar services as part of the state response.

Railroads

The department requested \$11.9 million in disaster funds through the FRA. The total regional repair costs exceeded the funds allocated by Congress.

The FRA approved \$5,834,307 of Iowa's requests for damage cost reimbursement to the following railroads, with the reimbursement being routed through the department:

Burlington Junction	\$10,000
CRANDIC	\$266,662
Cedar River	\$24,473
Chicago, Central & Pacific	\$651,533
Chicago & North Western	\$1,317,800
Council Bluffs	\$16,000
CP Rail	\$1,740,616
Davenport, Rock Island	\$157,966
Iowa Interstate	\$867,025
Iowa Northern	\$670,307
Iowa Traction	\$34,158
Keokuk Junction	\$77,767

Transit Facilities

Five transit agencies have sustained most of the damage caused by flooding. The initial estimates were:

Des Moines Metro Transit	\$6,000,000
Ames Transit	\$18,000
Coralville	\$ 5,000
Ottumwa	\$ 4,400
Region 12 (based in Carroll)	\$11,000

Damages were addressed through individual agency applications to FEMA for Public Assistance funding or through insurance.

State of Iowa Recreational Trail System

Flood damage on Iowa's Recreational Trail System is estimated to total \$1,644,873. The cost to individual trails is estimated to be:

Saylorville Trail	\$150,000
Ledges State Park Trails	\$75,000
Other state park trails	\$375,000
City of Des Moines	\$625,000 - \$800,000
Squaw Creek Trail, City of Ames	\$90,675
Harry Cook Nature Trail, City of Osage	\$7,646
Little River Trail, City of Leon	\$1,200
Raccoon River Valley Trail, Dallas & Guthrie Counties	\$7,150
Sauk Rail Trail, Carroll County	\$45,000
Wapsi-Great Western Line, Mitchell County	\$1,264
Cinder Path, Lucas County	\$6,695
Iowa Great Lakes Trail, Dickinson County	\$4,800
Prairie Rail Trail, Story County	\$7,030
Skunk River Greenbelt Trail, Story County	\$750

Damages were addressed through individual agency applications to FEMA Public Assistance funding or through insurance.

IV. AREAS OF EXCELLENCE

Agency-wide, personnel reacted very quickly and professionally to the many emergency situations. They reacted with enthusiasm and without hesitation to provide assistance wherever possible. Some examples include:

* In the Ottumwa and Eddyville area, entire maintenance garage staffs were dispatched to help reinforce or build sections of levees. They worked around the clock to help minimize the impact of the flood damage in these communities.

* Department forces were very quick to provide materials if those materials would help minimize flood damage. Some of the common materials furnished were sand, snow fence, barricades, and signs.

* Field maintenance personnel continually monitored highways to adequately provide traffic control and signs for detours and road closures due to water over the road. Flood conditions changed so rapidly that, at times, more than 45 state road closures were in effect simultaneously. Traffic control support was also provided by DOT motor vehicle enforcement officers.

* The department established four separate bridge crews which were equipped with sounding devices to inspect for underwater stream bed degradation which could undermine bridge support structures. Approximately 200 bridges were quickly inspected to verify the bridges were safe for use by the public.

* Department personnel were able to set up shifts to staff the EOC 24 hours a day. They established a training schedule and work process to ensure each DOT member staffing the EOC was able to coordinate activities with all divisions of the department.

* The department was able to furnish damage inspectors to participate in FHWA and FEMA inspections at all times required by both agencies.

* The department worked with the FHWA to administer ER funds to repair damages from flooding. Through the department's coordination, municipalities and counties received federal funding to repair damaged roadways and bridges on the federal-aid highway system.

* In a similar manner, the department's Rail and Water Division staff moved quickly to assemble railroad damage estimates and administer the FRA flood recovery program authorized by Congress in the fall of 1993.

V. PROBLEMS/ISSUES

* The experience gained on administration of such a massive ER program will be used to informally petition the FHWA for clarifications in the federal regulations governing the program.

* The FEMA field reviews need to be better coordinated well in advance of review dates to enable scheduling of appropriate departmental staff participation. In this situation, the problem was greatly expanded by the demands statewide for concurrent reviews. The DOT met these demands with staff from the nearest field office. However, it was difficult to staff several federal teams working in the same geographic area concurrently while continuing necessary departmental emergency operations.

IOWA FLOOD
DISASTER REPORT

ANNEX B

RECOMMENDATIONS FOR
STATE LEGISLATIVE
AND FEDERAL
CONGRESSIONAL REVIEW

STATE OF IOWA LEGISLATIVE ISSUES

JOB INSURANCE

The Governor announced on August 9th that Iowa employers would not be charged for their job insurance contribution during July through September regarding flood related benefits paid to their laid off workers. Permanent provisions should be made to the Iowa Employment Security Law during future legislative sessions. This legislation should be enacted to permanently benefit employers in future disasters.

EMERGENCY AND ESSENTIAL SERVICES

The Iowa Department of Personnel published guidance to each state government department concerning essential services, staffing, work sites, and employee working conditions. Flexibility regarding employee work hours was recommended, however, time away from work was required to be taken as vacation, compensatory time, or leave without pay. This guidance was implemented in varying ways by each of the departments. As state government operates statewide, this issue affects operations and activities in every county, some conducting normal operations while some are involved in emergency operations. As there are essential emergency services to be performed by state government employees, consideration should be given to enacting state legislation that would allow state workers to perform authorized work in a regular duty status outside their normal work activities, with the approval of their department head. Employees could continue in a pay status with their home department. This action could greatly assist in contingency planning and enhance overall state disaster preparedness.

COUNTY EMERGENCY MANAGEMENT

Emergency management operations in each of Iowa's 99 counties are extremely critical and vital links in the emergency management system. Currently, each county is authorized to staff an emergency management coordinator at less than full time. Legislation should be considered to require a paid, full time coordinator for each county that is certified by the state as a fully trained resource. These full time coordinators would provide sound, coordinated, effective, and up-to-date emergency multi-hazard plans that enhance overall preparedness at the local level. Requiring more detailed exercises at the local level monitored by state emergency management personnel would also assist in plan development and coordinated emergency response.

TAXABLE DISASTER AID INCOME

Consideration should be given to allow taxable disaster benefits and crop insurance proceeds received in 1994 to be reported either in 1993 or 1994 on state tax returns. Iowa tax provisions have generally followed federal provisions in this area, however, this action is not dependent on federal guidelines. Farmers were especially subjected to an unusual situation since disaster applications could not be accurately prepared until after the 1993 fall harvest. Most of the disaster funds paid by ASCS were received in 1994, thereby making that money taxable for that year. If a bumper crop is received in 1994, farmers could face additional taxes for their combined benefits and crops. Allowing taxable disaster benefits including crop insurance proceeds received in 1994 to be shifted to 1993 taxable income by individual taxpayer choice, would appear to be justified and consistent with fairness in state tax law.

FLOODPLAIN MANAGEMENT

Iowa could benefit from an expanded, comprehensive, and fully integrated floodplain management program. The current program has lost its momentum over the years due to changes in management responsibility and lack of adequate resourcing. Levees have been constructed and others altered without benefit of thorough project review or application of recent technology. Communities can not attain adequate state assistance in mitigating future damage or responding to potential flooding. The state's basic approach to floodplain management is one of protecting existing development while controlling new development in the floodplain. Personnel and funding resources devoted to this effort by the state have eroded, especially during the past several years.

An enhanced floodplain management program should be fully coordinated with the national program, and each surrounding state as state programs affect each other individually and collectively. Land use within floodplains needs to be examined and changed where appropriate to uses that are more adaptive to periodic flooding. Examples are fish, wildlife, and recreation areas with minimal developments, and agricultural lands managed with the expectancy of periodic flooding. Land cover such as bottomland forest, wetlands, oxbow lakes, and grasslands are most appropriate for floodplains. Reducing vulnerability to future floods is as important as improving disaster relief capabilities and programs. Watershed management should also be incorporated into assessment. Wetland restoration and unchannelized rivers can play a large role in reducing flood damage downstream. Electronic river monitoring and warning systems, detailed river basin modeling, extensive mapping, and other technology-based information are vital to the effectiveness of floodplain management. Personnel resources should include agriculture and civil engineering technicians who would be available to perform in the State Emergency Operations Center during emergencies. This expertise was extremely limited and not readily available in the State EOC during the 1993 flooding. The State of Iowa should review the floodplain management responsibility within the state and revise necessary laws to create a viable, effective program with adequate resources.

FEDERAL CONGRESSIONAL ISSUES

PUBLIC ASSISTANCE COST SHARE

The federal share of Public Assistance under the Robert T. Stafford Disaster Relief and Recovery Act must not be less than 75 percent of the net eligible cost of repair, restoration, reconstruction, or replacement activities implemented during relief operations for a Presidentially Declared Disaster. Although the federal share for the flood disaster was eventually increased to 90 percent, similar to other recent disasters occurring within the United States, the federal government should consider increasing the federal share through legislative change. Widespread disasters that cause every county to be declared federal disaster areas need an abundant amount of federal assistance, as state and local budgets do not have the emergency resources to provide necessary relief. Consideration should be given to pre-established levels of cost-sharing ranging from 75/25 to 100/0, depending upon the extent of the disaster damage. Whatever the cost-share percentage is determined to be, two elements are certain. The federal share should be increased from 75 percent, and the cost-share arrangement should be predetermined before the disaster strikes. States should not have to plead for increased disaster assistance from the Stafford Act while conducting emergency response and recovery operations. The formula must be based upon a set of conditions which must exist to receive more than 75 percent federal support, including local and state government's ability to pay the costs in an appropriate response timeframe. Per capita provisions may fit some situations, but it should not be a sole criteria for a local disaster in a highly populated state, i.e. California earthquakes.

INTEREST RATES OF FEDERAL LOANS

SBA loan rates at 4 and 8 percent and FmHA loan rates at 4.5 percent or less were not competitive in the current low interest rate environment. Interest rates on federal loans should be equal to or lower than commercial rates to encourage low cost borrowing during time of emergencies. Consideration should be given to revising interest rates on federal loans, basing rates on a variable scale related to current market rates.

INDIVIDUAL ASSISTANCE PROGRAM

Applications from citizens applying for grants are required to be reviewed by SBA for loan eligibility. If an applicant's financial condition qualifies them to repay a loan, then the application is processed as a loan, not a grant. Applicants who were turned down or rejected for a loan had their applications processed as a grant, as was originally requested. Not only does the involvement by SBA slow down the process, citizens are dissatisfied at being rejected in time of great stress. The general feeling among Iowans is that if they were not in great need, they would not have asked for grant assistance. Overall statistics support this feeling in that out of the 22,395 FEMA applications received to date, only 2,314 were approved for a low interest loan, substantiating the fact that most applicants were unable to repay a loan. This procedure should be a one step process of application where determination is made for either a grant or loan, or a combination of the two, based upon one simplified application to SBA.

LEVEE RESTORATION

Federal clarification of levee maintenance is required. The Corps of Engineers transition of levee maintenance from Corps to public responsibility in 1988 has created an unworkable situation. The cost of bringing levees to standard for Corps acceptance together with the COE decision to maintain only navigational levees has created a management problem for the state. The Soil Conservation Service has performed in an outstanding manner, but was initially restricted from repairing levees in floodplains over 400 square miles, and is still restricted from repairing individual agricultural levees. Federal legislation is required to fix responsibilities, to create a workable levee maintenance program that will remain workable in the future, and to cover all main river levees regardless of whether they protect infrastructure or individual agricultural ground. The use of Wetland Reserves and other restoration programs should be mandated in cases where restoration exceeds a ten year payback in total production revenue.

FEDERAL CROP INSURANCE

This program should receive a complete national review followed by major congressional reform to allow for cost effective choices for farmers and producers. The 1993 floods prevented many farmers from planting seed during the planting season. Insurance did not cover those fields not planted. Prevented planting protection, as well as late planting protection, and improved yield loss estimates are needed. A simple, flexible array of choices for crop coverage should be offered to farmers based on their overall farming operation and need for risk protection. Crop eligibility should be expanded to include all crops, and overall cost should remain low to encourage greater participation for overall crop protection by farmers and producers.

TAXABLE DISASTER AID INCOME

Consideration should be given to allow taxable disaster benefits including crop insurance proceeds received in 1994 to be reported either in 1993 or 1994 on federal tax returns. Farmers were especially subjected to an unusual situation since disaster applications could not be accurately prepared until after the 1993 fall harvest. Most of the disaster funds paid by ASCS were received in 1994, thereby making that money taxable for that year. If a bumper crop is received in 1994, farmers could face additional taxes for their combined benefits and crops. Allowing taxable disaster benefits and crop insurance proceeds received in 1994 to be shifted to 1993 taxable income by individual taxpayer choice, would appear to be justified and consistent with fairness in federal tax law.

ECONOMIC DEVELOPMENT GRANTS

Disaster funding provided by the Economic Development Administration (EDA) has not been responsive to the needs of the state. The EDA process of review and requirements for communities to satisfy strategic mitigation plans in order to get specific flood damaged projects approved and funded, is too slow for disaster relief. Either an accelerated process is necessary, or future disaster funds should be removed from EDA and placed into the Community Block Development Grant program. The CBDG program has proven to be highly responsive to disaster response operations.

NATIONAL FLOOD INSURANCE PROGRAM

The NFIP is not attractive to many Iowans. The program has an increasing proportion of extremely high-risk policy-holders and a very low rate of participation among eligible individuals. This has caused insurance premiums to become too high for lower risk properties. Additionally, insurance promotes the repair of damaged property over measures to mitigate future losses. Although the NFIP has provisions to purchase damaged, insured property, eligibility and program funding do not meet property owner needs and requirements. The NFIP should be reformed to broaden and reduce the risk pool. Mitigation coverage to fund floodproofing measures for floodprone properties would reduce risk. Revised premiums based on risk and repeated claims would shift the premium burden to high-risk properties, and make insurance more affordable for lower risk property owners. Insurance regulators should insure that mortgage lenders comply with mandatory flood insurance purchase requirements by property owners, thereby broadening the risk pool. These reforms would enhance the fiscal health of the program and reduce property owner reliance on federal disaster assistance in time of need.

ACCESS TO DISASTER ASSISTANCE DATA

A system should be developed to provide state and local agencies with applicant data received from federal sources. Access to an electronic common disaster assistance database by federal, state, and local agencies would save time and money, provide a current status of applications, and reduce duplication of disaster benefits. Federal agencies such as FEMA, SBA, FmHA, EDA, SCS, Corps of Engineers, and others, as well as various state and local agencies, could greatly benefit from the sharing of applicant data. A system could be designed to include both Individual and Public Assistance applications throughout initial submission, damage assessment and mitigation, and project completion or potential buy-out of property. Such a system would reduce confusion pertaining to the status of applications, save valuable time during periods of emergency, and reduce current efforts by states to download data for various uses. An efficient system of information sharing among all government agencies will improve and expedite program benefits to individual citizens and public entities.

FLOODPLAIN MANAGEMENT

Federal action is necessary to upgrade floodplain management in the Missouri and Mississippi River basins. Use of US Department of Defense assets, such as Air Force satellite capability, in close cooperation with the National Oceanic and Atmospheric Administration would provide outstanding capability to accurately map both river basins at one-foot intervals. An important subsequent initiative to this would be the electronic monitoring of river flows and contingency modeling in those communities where significant damage occurred. Following this improved method of projecting the most significant impacts, long range mitigation projects can be planned and funded. This approach will provide a more accurate, effective solution to flood protection over current sporadic mitigation initiatives. Federal and state agreements must be developed and approved to insure proper state support to the overall mitigation effort.

IOWA FLOOD
DISASTER REPORT

ANNEX C

INTERNAL
STATE ISSUES

INTERNAL STATE ISSUES

ENHANCE AND UPGRADE EMERGENCY PREPAREDNESS

A complete, in depth review and revision of the Iowa Emergency Plan and all annexes is needed. Supporting plans prepared and implemented at department level require revision or further development. Additional formal written procedures are needed in areas of communications, EOC operations and staffing, volunteer and donation management, media operations, damage assessment, and weather forecasting, warning, and analysis (including river level prediction). These procedures should be incorporated into county and local emergency plans as appropriate and approved by the state. Exercise and training scenarios must be upgraded, and plans exercised frequently down to local level, with participation from departments and agencies with functional emergency responsibilities.

State department representatives and local emergency management personnel should be certified as fully trained before performing emergency duties. Training courses can be presented or coordinated through Emergency Management Division for state and local emergency management personnel and those detailed to perform emergency action duties. Some local county personnel should receive additional training for hazards unique to their communities.

Mobilization personnel should be identified, trained, and released for duty with emergency management both at state and local level. Consideration should be given to provide regional disaster coordination within Iowa. Regional resources could be used to augment state and local emergency management activities, assist in training, and enhance overall preparedness. Permanent staffing in Emergency Management Division and emergency EOC staffing from the Iowa National Guard and other state agencies should be reviewed and changed in accordance with needs.

Overall disaster preparedness can be enhanced through interagency communication, and periodic briefings, training sessions, and other forums facilitated by Emergency Management Division. All government organizations should continue to expand their network of information and support that proved useful during the floods.

COMMUNICATIONS AND SERVICES

The application of technology is strongly encouraged to include fiber optics for communication and services among all state and local government agencies in all 99 Iowa counties. Communications and services must be compatible by all users. The additional use of cellular telephones, fax machines, and other means must be planned and implemented without delay. Agency hotlines (toll-free 800 lines) must be planned, installed, publicized, and activated immediately upon need. Communications and services must be planned for use during periods without electrical power or telephone service caused by natural disasters. Lack of computer compatibility between FEMA and the state regarding disaster assistance data must be permanently resolved to further expedite delivery of assistance to disaster victims.

LEVEE MANAGEMENT

Consideration should be given to dedicating state resources to levee management coordination. Personnel and resources should be available for both emergencies and non-emergencies to coordinate levee matters. The primary focus of need is on comprehensive long-term solutions rather than short-term fixes.

DELIVERY OF DISASTER ASSISTANCE

The delivery of disaster assistance can be greatly expedited by using existing private and public organizations for outreach and assistance to disaster victims. This method was used with tremendous success in certain areas during flood relief, however, various agencies should more fully develop these and other methods of delivery. Farmers were greatly assisted through ASCS, SCS, and FmHA offices and networks. The Iowa Bankers Association and Small Business Development Centers greatly assisted small businesses applying for SBA loans and coordinating other business matters. Iowa State University Extension provided timely information, outreach, and guidance to citizens. Community Mental Health Centers, Community Action Agencies, and Councils of Governments provided extensive outreach and assistance to flood victims. Other organizations provided similar services through their networking and service providers. Technical and professional associations can provide statewide networking that can greatly assist in the execution of disaster operations. Emergency planners must utilize all available networks of support to deliver assistance in an effective and efficient manner.

