

Report to the Colorado General Assembly:

# 1965 FLOOD DISASTERS IN COLORADO



COLORADO LEGISLATIVE COUNCIL

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1965 FLOOD DISASTERS IN COLORADO

(Colorado Legislative Council)

Report To The  
Colorado General Assembly

Research Publication No. 106  
November, 1965

# COLORADO GENERAL ASSEMBLY

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Chairman  
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## LEGISLATIVE COUNCIL

ROOM 341, STATE CAPITOL  
DENVER, COLORADO 80203  
222-9911 - EXTENSION 2285

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Lt. Gov. Robert L. Knous  
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Sen. Ruth S. Stockton

Speaker Allen Dines  
Rep. Forrest G. Burns  
Rep. Richard G. Gebhardt  
Rep. Harrie E. Hart  
Rep. Mark A. Hogan  
Rep. John R. P. Wheeler

November 23, 1965

To Members of the Forty-fifth Colorado General Assembly:

In accordance with the provisions of House Joint Resolution No. 1003 and Senate Joint Resolution No. 3, 1965 special session, the Legislative Council submits the accompanying report and recommendations relating to flood disasters.

This report and recommendations were accepted by the Council at its meeting on November 22, 1965, for transmission to the members of the Forty-fifth General Assembly. This material has also been transmitted to the Governor with a request that Bills A, B, and C be included as subjects for legislative consideration in the 1966 session.

Respectfully submitted,

Senator Floyd Oliver  
Chairman

FO/mp

# COLORADO GENERAL ASSEMBLY



## LEGISLATIVE COUNCIL

ROOM 341, STATE CAPITOL  
DENVER, COLORADO 80203  
222-9911 - EXTENSION 2285

November 9, 1965

Senator Floyd Oliver, Chairman  
Colorado Legislative Council  
Room 341, State Capitol  
Denver, Colorado

Dear Mr. Chairman:

Your committee appointed to carry out the assignments under the directives of House Joint Resolution No. 1003 and Senate Joint Resolution No. 3, 1965 special session, relating to flood disasters, has completed its study and submits the accompanying report and recommendations thereon.

Respectfully submitted,

Representative Kenneth Monfort  
Chairman

KM/mp

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Vice Chairman

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## FOREWORD

During the special session which followed the flood disasters of last June, the General Assembly directed the Legislative Council to conduct "a study of the ways and means the State of Colorado should follow in preparing on a permanent basis to meet disasters of all types," with a report thereon to be submitted to the Second Regular Session of the Forty-fifth General Assembly. The members of the committee created by the Council to carry out this assignment included:

Representative Kenneth Monfort,  
Chairman

Senator Anthony F. Vollack,  
Vice Chairman

Senator John R. Birmingham

Senator Roger Cisneros

Senator Vincent Massari

Senator Wilson Rockwell

Representative Lowell B. Compton

Representative Joseph Gollob

Representative Bill Gossard

Representative Harrie E. Hart

Representative Tom Jordan

Representative Gerald Kopel

Representative C. P. Lamb

Representative Betty Miller

Senator Floyd Oliver, chairman of the Legislative Council, also served as an ex officio member of the committee.

The Legislative Council's Committee on Disasters held a series of meetings with state, local, and federal officials, as well as individual citizens, to obtain information on the June flood disasters -- in Denver on July 23, August 23, September 9, and October 13, and in Lamar on August 4. The assistance provided the committee and the staff by these officials and other interested individuals is gratefully acknowledged.

Phillip E. Jones, senior research analyst for the Legislative Council, had the primary responsibility for the research work connected with the committee's study, aided by Roger M. Weber, research assistant. Miss Clair T. Sippel, Secretary of the Legislative Reference Office, provided the bill drafting services for the committee.

November 23, 1965

Lyle C. Kyle  
Director

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## COMMITTEE REPORT AND RECOMMENDATIONS

Following the flood disasters of last June, the Colorado General Assembly was called into extraordinary session by Governor John A. Love to provide a program for the repair and reconstruction of the public highways in this state which had been destroyed or damaged. In addition to providing the funds for this type of program through the adoption of an emergency one-cent tax on motor fuels, the members of the General Assembly also directed the Legislative Council to conduct "a study of the ways and means the State of Colorado should follow in preparing on a permanent basis to meet disasters of all types, including recommendations concerning a joint financing arrangement between the state and local governmental units coordinated at the same time with federal aid," with a report thereon to be submitted to the Second Regular Session of the Forty-fifth General Assembly.

Under the provisions of House Joint Resolution No. 1003 and Senate Joint Resolution No. 3, 1965 special session, the Legislative Council was specifically directed to include the following in its study:

- (1) The possible establishment of an administrative agency to coordinate and direct disaster relief;
- (2) Collection and dissemination of statistical information concerning the financial impact of disasters;
- (3) The provision of technical services for recovery from disasters;
- (4) The provision of services for the distribution of disaster relief funds, supplies, and services;
- (5) The provision of information to the Governor and to the General Assembly essential to executive and legislative action necessary for the recovery from disasters;
- (6) The possible establishment of a state disaster relief fund, including consideration of a constitutional amendment;
- (7) The possible enactment of flood plain management legislation to prevent further loss of life and of economic loss caused by excessive flooding; and
- (8) The additional areas of flood prevention by state agencies, flood insurance, and control of flood plain areas.

The committee created by the Legislative Council to carry out these assignments agreed that the members should develop answers to three general questions:

- (1) How did the state -- its agencies and its citizens -- perform during the June floods?



(2) What can the General Assembly do to improve the state's performance during flood disasters through the adoption of changes in administrative procedures and through statutory or constitutional enactments?

(3) What can the state do to lessen the impact of future disasters?

On the basis of information provided by persons meeting with the committee, including numerous state, local, and federal officials, as well as material prepared by the staff, the members of the committee have reached the following conclusions and submit the following recommendations:

With respect to performances during the June floods, the members believe that state and local officials and employees merit the highest of praise for their actions during the emergency brought on by the June floods. Similar commendations are also due federal officials and agencies for their efforts during and following the floods. The outstanding performances of organizations such as the American Red Cross and the Salvation Army also deserve special mention, as do those of the savings and loan associations and those banks and other lending institutions taking immediate measures to assist their customers who sustained damages from the rampaging waters of last June.

However, the irrational action of man was also demonstrated during the floods by the arrival of the curious during times when preventative or restorative measures were being taken. These people, either through ignorance or unconcern for the welfare of others, perhaps always will be present in the event of a disaster no matter how large or small.

In general, the committee believes that because operations during and following the June flood disasters were conducted so well, only the most necessary of changes should be made. On the whole, the General Assembly has already provided most of the machinery which is needed by legislation to meet disasters in this state through such measures as the Disaster Relief Act of 1959 and the Colorado Civil Defense Act of 1950.

Specifically, the committee supports the establishment of a primary emergency operations center at Camp George West near Golden, as is being carried out under the present legislation and appropriations, with one-half of the construction costs being sustained by the federal government. The committee does not believe, however, that a specific office of disaster coordination need be established by law, nor is any legislation needed to improve present programs for operations in the event of future disasters other than an amendment to 3-17-3 (1), Colorado Revised Statutes 1963, adding "civil disturbance" to the definition of "major disaster" in the Disaster Relief Act of 1959, as proposed in Bill A accompanying this report.

So far as recovery operations are concerned, the committee recommends the adoption of legislation to authorize public agencies to utilize the temporary use of privately-owned equipment during periods

of emergency, with just and reasonable compensation to be paid the owners thereof as provided in Bill B. In addition, a specific state agency such as the Division of Civil Defense under the Adjutant General should be designated to work with and to coordinate relief and recovery operations following disasters. It would also be most helpful if such an agency were charged with the responsibility of preparing, on a continuing basis, a concise publication on relief programs available to governmental units and individuals in the event of future disasters.

The committee wishes to emphasize that when a true emergency exists, the Governor should not be required to go through lengthy procedures to implement relief programs which are needed immediately to provide the maximum benefits and results. Moreover, as was the case in the June flood disasters, state agencies should continue to provide local governmental units with their personnel and other services to assist with their post-disaster recovery operations. Bill C would allow the Governor to authorize officers of the State Patrol to assist local law enforcement officials in an emergency. At present, the Colorado State Patrol Board has this authority.

Furthermore, it seems evident that the appropriation to the State Agriculture and Disaster Fund in the amount of \$150,000 a year is sufficient, especially when coupled with the annual appropriation of \$50,000 to the Governor's emergency fund. In the event of a disaster requiring the expenditure of funds in an amount greater than is available in these two funds, the General Assembly should be called into special session by the Governor for appropriate emergency action. The committee therefore recommends that no change be made in the appropriations made by the General Assembly for emergency purposes.

Communications represented one of the major problems encountered during the emergency resulting from the June floods, and improvements in this respect are needed. The committee believes, however, that no additional legislation is needed. Steps should be taken through administrative action to insure better communications between state officials and employees, between state and local officials, between disaster officials and the general public, between officials of different local jurisdictions, and between officials within the same local jurisdiction. For example, the appropriate agencies and officials should explore the possibility of installing short-wave radios in school buses, as was recommended at one of the committee's meetings, and whether it would be logical for a communication's network to be organized on a district basis as part of the civil defense program within the state. Already the Colorado Water Conservation Board and the State Engineer's Office are studying a program for better communications along tributary streams through the use of "spotters" or a system of measuring devices to report streamflow and high water conditions to water district commissioners who in turn would relay this information to the State Engineer's Office where it could be analyzed and appropriate warnings issued.

Additional state financing may be necessary to implement some of the proposals advanced to correct problems noted in the disaster operations of last June such as the program under study by the Colorado

Water Conservation Board and State Engineer's Office. However, the committee sees no need for additional state financing at this time to share the cost with local governmental units in obtaining equipment to meet emergency situations or to help make the civil defense program more attractive to the people and local governmental units. The committee believes that these are the responsibility of local government.

At the state level, the Office of Emergency Planning is a federally-financed program in conjunction with the activities of the programs under the Adjutant General. However, this office will cease to function on July 1, 1966, unless the General Assembly appropriates state funds to continue its operations. The committee believes that the Adjutant General should integrate the operations of the Office of Emergency Planning into the normal day-to-day activities of the programs under his direction.

As was mentioned earlier, the actions of local officials during the June emergency were quite commendable. Various local actions could be taken, however, to improve conditions for future disasters. Local authorities generally need to institute regular insect and rodent control programs and better routine control of the disposal of solid wastes. Water and sewage plants built in the future should be located in areas not vulnerable to flooding, and each community should make provisions for its own system of communication during an emergency. In this latter connection, every local governmental unit in the state, whether involved in the June flood disasters or not, should take immediate steps to fulfill their part of the state disaster plan as soon as it is adopted. (Appendix A contains the text of a draft of this state plan.) In light of the experience during the June floods, as reported to the committee, it is most essential that effort be devoted locally to centralizing all disaster activities and operations.

So far as the future is concerned, there are two main courses of action which may be taken to prevent floods or to minimize the damages resulting from flooding water -- flood control projects and flood plain regulation. Flood control projects are essentially carried out by the federal government through the Corps of Engineers and the Bureau of Reclamation. Fortunately for the people of Colorado, several flood control and reclamation projects have already been constructed in this state and others are planned. In the opinion of the committee members, an over-all program of flood control should be agreed upon in connection with the state's plan for the development of its water resources, and representatives of the state, political subdivisions of the state, and the general citizenry should provide Congress with continuing evidence of their unified support for the implementation of this plan and the flood control projects necessary thereunder.

Had this unified support been evidenced several years ago, it is quite likely that the Chatfield and Narrows Projects would have been constructed and the damage to the South Platte River Basin from the June floods would have been considerably reduced. But flood control dams and reservoirs cannot provide total protection against the ravages of nature. They can serve to help keep water away from man; keeping man away from water is another matter entirely, however, and requires the exercise of power and responsibility by state and local governments.

In order for state and local governments to exercise the power and responsibility to complete this two-pronged approach to eliminating flood dangers and damages, enabling legislation must be adopted providing for flood plain regulation and management. After consulting the Attorney General and based on the information and recommendations submitted to the committee, the members are proposing that the General Assembly adopt legislation along the lines of that contained in Bill D accompanying this report. In effect, this proposed legislation would specifically provide local governing bodies with flood plain regulation powers.

As part of its assignment, the committee considered the necessity of two amendments to the constitution. Under the provisions of our constitution, the state is prohibited from making appropriations to private individuals or groups such as persons suffering damages resulting from natural disasters (Section 34, Article V). Further, the question was raised during the committee's study as to whether our constitution should include a statement providing for continuity of government in the event of a major disaster in the future. The committee believes that no changes in our constitution are necessary. However, the Rules of the General Assembly should be amended to provide for successors to the Speaker of the House of Representatives and to the President Pro Tem of the Senate in the event these officials are incapacitated while the General Assembly is not in session, thereby considerably lengthening the list of those officials succeeding to the office of Governor.

The latest figures reported to the committee on the emergency financing program adopted in the 1965 special session are contained in Appendix B of the accompanying research report. On the basis of this information, it appears that there may be some \$250,000 in state funds remaining after the completion of the flood-caused restoration work. However, the Chief Engineer of the Department of Highways indicates that a complete and accurate breakdown of costs as compared to original estimates will be available around January 1, 1966, and this information will be provided the members of the General Assembly at that time.

In concluding its report, the committee would point out that complete information on the June flood disasters is still not yet available and that the members have reached their conclusions on the basis of preliminary or tentative information in some cases. In addition, several groups are conducting studies which could prove significant in the consideration of future legislative action on preventative measures or post-disaster recovery operations. Consequently, as a result of these studies and the development of additional information, the members of the General Assembly may well receive additional recommendations from these groups for consideration in the 1967 regular session.

BILL A

A BILL FOR AN ACT

AMENDING 3-17-3 (1), COLORADO REVISED STATUTES 1963, CONCERNING  
THE DEFINITION OF "MAJOR DISASTER".

Be It Enacted by the General Assembly of the State of Colorado:

SECTION 1. 3-17-3 (1), Colorado Revised Statutes 1963, is  
hereby amended to read:

3-17-3. Definitions. (1) "Major disaster" means flood, drought, blizzard, storm, CIVIL DISTURBANCE, insects or other pest infestation, plant contagion, pestilence, epidemic, hurricane, tornado, earthquake, or other catastrophe in any part of the state and which is or threatens to be of sufficient severity and magnitude and so widespread as to be clearly beyond the actual and potential abilities of the local governmental units and other agencies to deal with and therefore to require summary action and the expenditure by the state of public funds to prevent or alleviate common distress or hazard to life or property.

SECTION 2. Safety clause. The general assembly hereby finds, determines, and declares that this act is necessary for the immediate preservation of the public peace, health, and safety.

BILL B

A BILL FOR AN ACT

AMENDING 3-17-5, COLORADO REVISED STATUTES 1963, CONCERNING DISASTERS AND AUTHORIZING THE GOVERNOR TO TAKE ADDITIONAL EMERGENCY MEASURES WITH RESPECT TO DISASTER RELIEF.

Be It Enacted by the General Assembly of the State of Colorado:

SECTION 1. 3-17-5 (2) (c), Colorado Revised Statutes 1963, is hereby amended and said 3-17-5 (2) is further amended BY THE ADDITION OF THE FOLLOWING NEW PARAGRAPHS (f) and (g) to read:

3-17-5. Emergency measures. (2) (c) Enter into contracts for the acquisition, rental, or hire of equipment, services, materials, and supplies and for supervision and administration of work which he directs to be performed; AND TAKE PRIVATE PROPERTY FOR TEMPORARY USE FOR THE PROTECTION OF THE PUBLIC PEACE, HEALTH, AND SAFETY DURING THE PERIOD OF A DISASTER, DETERMINE OR CAUSE TO BE DETERMINED THE FAIR VALUE FOR THE USE OF AND ANY DAMAGE TO SUCH PROPERTY OR FOR FAILURE TO RETURN SUCH PROPERTY TO THE OWNER, AND COMPENSATE THE OWNER THEREFOR IN THE AMOUNT OF SUCH DETERMINATION.

(f) Coordinate post-disaster work and designate a state agency or agencies to effect such coordination, and cause to be disseminated information as to services, both public and private, available to individuals and businesses in alleviating suffering and damage occasioned by a major disaster.

(g) Invoke any or all of the applicable provisions of article 1 of chapter 24, C.R.S. 1963, relating to civil defense, in the event of a major disaster.

SECTION 2. Safety clause. The general assembly hereby finds,

determines, and declares that this act is necessary for the immediate preservation of the public peace, health, and safety.

BILL C

A BILL FOR AN ACT

AMENDING 120-10-15 (10), C.R.S. 1963, CONCERNING THE POWERS OF OFFICERS OF THE COLORADO STATE PATROL IN AN EMERGENCY.

Be It Enacted by the General Assembly of the State of Colorado:

SECTION 1. 120-10-15 (10), Colorado Revised Statutes 1963, is hereby amended to read:

120-10-15. Powers and duties of officers. (1) The chief, and all the officers appointed under the provisions of this article, subject to the exceptions stated in this subsection (10), shall not be used at any time, nor under any circumstances, by any authority of the state in any manner in the enforcement of any law other than that specifically provided in this article; provided, that in an emergency, and with the approval of the ~~Colorado-state-patrol-board~~ GOVERNOR, they are authorized and empowered to assist or aid any sheriff or other peace officer in the performance of his duties upon his request or the request of other local officials having jurisdiction, and on such occasions, while so acting, they shall have the powers and authority of any sheriff or other peace officer. Furthermore, they shall not be deputized as deputy sheriffs or as other peace officers by any local or state authority, nor shall they be required to serve or act on strike duty, riots, lockouts, or other labor disputes, nor shall they perform any of the functions commonly performed by the national guard.

SECTION 2. Safety clause. The general assembly hereby finds, determines, and declares that this act is necessary for the immediate preservation of the public peace, health, and safety.



BILL D

A BILL FOR AN ACT

PROVIDING FOR FLOOD PREVENTION AND CONTROL IN CITY, TOWN, COUNTY,  
AND REGIONAL PLANNING AND ZONING.

Be It Enacted by the General Assembly of the State of Colorado:

SECTION 1. 139-59-7, Colorado Revised Statutes 1963, is hereby amended to read:

139-59-7. Purposes in view. In the preparation of such plan the commission shall make careful and comprehensive surveys and studies of present conditions and future growth of the municipality and with due regard to its relation to neighboring territory. The plan shall be made with the general purpose of guiding and accomplishing a coordinated, adjusted, and harmonious development of the municipality and its environs, health, safety, morals, order, convenience, prosperity, and general welfare, as well as efficiency and economy in the process of development, including among other things, adequate provision for traffic, the promotion of safety from fire, FLOOD WATERS, and other dangers, adequate provision for light and air, the promotion of healthful and convenient distribution of population, the promotion of good civic design and arrangement, wise and efficient expenditure of public funds, and the adequate provisions of public utilities and other public requirements.

SECTION 2. 139-60-1, Colorado Revised Statutes 1963, is hereby amended to read:

139-60-1. Grant of power. (1) For the purpose of promoting health, safety, morals, or the general welfare of the community, the legislative body of each city and incorporated town is hereby empowered to regulate and restrict the height, number of stories, and

size of buildings and other structures, the percentage of lot that may be occupied, the size of yards, courts, and other open spaces, the density of population, and the location and use of buildings, structures, and land for trade, industry, residence, or other purposes, AND, SUBJECT TO THE PROVISIONS OF SUBSECTION (2) OF THIS SECTION, AND TO THE END THAT ADEQUATE SAFETY MAY BE SECURED, SAID LEGISLATIVE BODY SHALL HAVE POWER TO ESTABLISH, RESTRICT, AND LIMIT THE BUILDING OR SETBACK LINES ON OR ALONG ANY STORM OR FLOODWATER RUNOFF CHANNEL OR BASIN IN ORDER TO LESSEN OR AVOID THE HAZARDS TO PERSONS AND DAMAGE TO PROPERTY RESULTING FROM THE ACCUMULATION OF STORM OR FLOOD WATERS.

(2) THE POWER CONFERRED BY SUBSECTION (1) OF THIS SECTION FOR FLOOD PREVENTION AND CONTROL SHALL NOT BE EXERCISED SO AS TO DEPRIVE THE OWNER OF ANY EXISTING PROPERTY OF ITS USE OR MAINTENANCE FOR THE PURPOSE TO WHICH IT IS LAWFULLY DEVOTED ON THE EFFECTIVE DATE OF THIS SUBSECTION, BUT PROVISIONS MAY BE MADE FOR THE GRADUAL ELIMINATION OF USES, BUILDINGS, AND STRUCTURES, INCLUDING PROVISIONS FOR THE ELIMINATION OF SUCH USES WHEN THE EXISTING RIGHTS OF THE PERSONS IN POSSESSION THEREOF ARE TERMINATED OR WHEN THE USES TO WHICH THEY ARE DEVOTED ARE DISCONTINUED, AND FOR THE ELIMINATION OF SUCH BUILDINGS AND STRUCTURES WHEN THEY ARE DESTROYED OR DAMAGED IN MAJOR PART.

SECTION 3. 139-60-3, Colorado Revised Statutes 1963, is hereby amended to read:

139-60-3. Purposes in view. Such regulations shall be made in accordance with a comprehensive plan and designed to lessen congestion in the streets; to secure safety from fire, panic, FLOOD WATERS, and other dangers; to promote health and general welfare; to provide adequate light and air; to prevent the overcrowding of land; to avoid undue concentration of population; to facilitate the adequate provision of transportation, water, sewerage, schools, parks, and other

public requirements. Such regulations shall be made with reasonable consideration, among other things, as to the character of the district and its peculiar suitability for particular uses, and with a view to conserving the value of buildings and encouraging the most appropriate use of land throughout such municipality.

SECTION 4. 106-2-5 (3), Colorado Revised Statutes 1963, is hereby amended to read:

106-2-5. Adoption of master plan - contents. (3) The master plan of a county or region, with the accompanying maps, plats, charts, and descriptive and explanatory matter, shall show the county or regional planning commission's recommendations for the development of the territory covered by the plan, and may include: The general location, character, and extent of streets or roads, viaducts, bridges, parkways, playgrounds, forests, reservations, parks, airports, and other public ways, grounds, places and spaces; the general location and extent of public utilities and terminals, whether publicly or privately owned, for water, light, power, sanitation, transportation, communication, heat, and other purposes; the acceptance, widening, removal, extension, relocation, narrowing, vacation, abandonment, or change of use of any of the foregoing public ways, grounds, places, spaces, buildings, properties, utilities, or terminals; the general character, location, and extent of community centers, town sites, housing developments, whether public or private, and urban conservation or redevelopment areas; the general location and extent of forest, agricultural areas, FLOOD CONTROL AREAS, and open development areas for purposes of conservation, food and water supply, sanitary and drainage facilities, FLOOD CONTROL, or the protection of urban development; and a land classification and utilization program.

SECTION 5. 106-2-10, Colorado Revised Statutes 1963, is hereby amended to read:

106-2-10. Zoning plan. (1) The county planning commission of any county may, and upon order by the board of county commissioners in any county having a county planning commission shall make a zoning plan or plans for including both the full text of the zoning resolution and the maps, and representing the recommendations of the commission for the regulation by districts or zones of the location, height, bulk, and size of buildings and other structures, percentage of lot which may be occupied, the size of lots, courts, and other open spaces, the density and distribution of population, the location and use of buildings, and structures for trade, industry, residence, recreation, public activities, or other purposes, and the uses of land for trade, industry, recreation, or other purposes, AND, SUBJECT TO THE PROVISIONS OF SUBSECTION (2) OF THIS SECTION, AND TO THE END THAT ADEQUATE SAFETY MAY BE SECURED, THE COUNTY PLANNING COMMISSION MAY INCLUDE IN SAID ZONING PLAN OR PLANS PROVISIONS ESTABLISHING, REGULATING, AND LIMITING THE BUILDING OR SETBACK LINES ON OR ALONG ANY STORM OR FLOODWATER RUNOFF CHANNEL OR BASIN IN ORDER TO LESSEN OR AVOID THE HAZARDS TO PERSONS AND DAMAGE TO PROPERTY RESULTING FROM THE ACCUMULATION OF STORM OR FLOOD WATERS.

(2) THE POWER CONFERRED BY SUBSECTION (1) OF THIS SECTION FOR FLOOD PREVENTION AND CONTROL SHALL NOT BE EXERCISED SO AS TO DEPRIVE THE OWNER OF ANY EXISTING PROPERTY OF ITS USE OR MAINTENANCE FOR THE PURPOSE TO WHICH IT IS LAWFULLY DEVOTED ON THE EFFECTIVE DATE OF THIS SUBSECTION, BUT PROVISIONS MAY BE MADE FOR THE GRADUAL ELIMINATION OF USES, BUILDINGS, AND STRUCTURES, INCLUDING PROVISIONS FOR THE ELIMINATION OF SUCH USES WHEN THE EXISTING RIGHTS OF THE PERSONS IN POSSESSION THEREOF ARE TERMINATED OR WHEN THE USES TO WHICH THEY ARE DEVOTED

ARE DISCONTINUED, AND FOR THE ELIMINATION OF SUCH BUILDINGS AND STRUCTURES WHEN THEY ARE DESTROYED OR DAMAGED IN MAJOR PART.

SECTION 6. 106-2-12 (1), Colorado Revised Statutes 1963, is hereby amended to read:

106-2-12. Regulation of size and use - districts. (1) When the county planning commission of any county makes, adopts, and certifies to the board of county commissioners plans for zoning the unincorporated territory within any county, or any part thereof, including both the full text of a zoning resolution and the maps, after public hearing thereon, the board of COUNTY commissioners, by resolution, may regulate in any portions of such county which lie outside of cities and towns, the location, height, bulk, and size of buildings and other structures, the percentage of lot which may be occupied, the size of yards, courts, and other open spaces, the uses of buildings and structures for trade, industry, residence, recreation, public activities, or other purposes, and the uses of land for trade, industry, residence, recreation, or other purposes, AND FOR FLOOD CONTROL. In order to accomplish such regulation, the board of county commissioners may divide the territory of the county which lies outside of cities and towns into districts or zones of such number, shape, or area as it may determine, and within such districts, or any of them, may regulate the erection, construction, reconstruction, alteration, and uses of buildings and structures and the uses of land, and may require and provide for the issuance of building permits as a condition precedent to the right to erect, construct, reconstruct, or alter any building or structure within any district covered by such zoning resolution.

SECTION 7. 106-2-14, Colorado Revised Statutes 1963, is hereby amended to read:

106-2-14. Public welfare to be promoted. Such regulations shall

be designed and enacted for the purpose of promoting the health, safety, morals, convenience, order, prosperity, of the present and future inhabitants of the state, including, the lessing of congestion in the streets or roads or reducing the waste of excessive amounts of roads, securing safety from fire, FLOOD WATERS, and other dangers, providing adequate light and air, classification of land uses and distribution of land development and utilization, protection of the tax base, securing economy in governmental expenditures, fostering the state's agricultural and other industries, and the protection of both urban and nonurban development.

SECTION 8. Effective date. This act shall take effect July 1, 1966.

SECTION 9. Safety clause. The general assembly hereby finds, determines, and declares that this act is necessary for the immediate preservation of the public peace, health, and safety.

AMENDMENT OF SENATE AND HOUSE RULES TO PROVIDE SUCCESSION TO OFFICE OF THE PRESIDENT PRO TEM AND THE OFFICE OF THE SPEAKER OF THE HOUSE OF REPRESENTATIVES WHEN GENERAL ASSEMBLY IS NOT IN SESSION - PURPOSE TO INCREASE THE NUMBER OF OFFICIALS SUCCEEDING TO POWERS AND DUTIES OF GOVERNOR IN PROVIDING FOR CONTINUITY OF GOVERNMENT.

AMENDMENT TO SENATE RULES - Amend Senate Rule 12 - PRESIDENT AND PRESIDING OFFICERS - by adding new subsection (d):

(d) At the beginning of each regular session convening after a general election, and at such other times as may be necessary, the senate shall, by a majority vote of all members elected, designate a succession from its members who, in order of succession, as acting president pro tem, shall exercise all the powers and duties of the president pro tem only in the event of the death, resignation, disability, or absence from the state of the president pro tem when the senate is not in session, but the exercise of such powers and duties by the acting president pro tem shall continue only until the senate shall meet or until the disability or absence from the state of the president pro tem is removed, which ever shall occur first; provided, that in accordance with the provisions of section 15 of article IV of the state constitution, the duties of the governor, under circumstances prescribed in said section 15, shall first devolve upon the speaker of the house of representatives before they shall devolve upon any such acting president pro tem who is exercising the powers and duties of the president pro tem as hereinabove provided.

AMENDMENT TO HOUSE RULES - Amend House Rule 2 - ORGANIZATION - by adding new subsection (g):

(g) By election, designate a succession from its members who, in order of succession, as acting speaker, shall exercise all the powers and duties of the speaker only in the event of the death, resignation, disability, or absence from the state of the speaker

when the general assembly is not in session, but the exercise of such powers and duties by the acting speaker shall continue only until the general assembly shall meet or until the disability or absence from the state of the speaker is removed, whichever shall occur first.



## The Week Beginning June 14th

In many parts of Colorado, the week beginning Monday, June 14, 1965, represented the first full week of summer vacation for school students. Before this week was over, however, Eastern Colorado experienced the worst natural disaster in the history of the state. Twenty-one men, women, and children died. A total of 605 persons suffered injuries or illnesses attributed to the floods, with 58 of these being serious enough to require hospitalization. More than 5,000 homes, trailers, and farm buildings were destroyed or damaged, and some 6,700 small businesses were destroyed or severely damaged. In cold figures which hardly reflect human suffering and loss, total damages were estimated at 543 million dollars.

The week beginning June 14th had been preceded by a series of showers and thunderstorms resulting from a build up of masses of warm gulf moisture and cool Pacific Northwest fronts meeting and settling along the east front of the Continental Divide. On June 13th, a long-time resident of Loveland, who was talking to an Illinois couple thinking of moving to this Colorado town, assured the visitors that there had never been a tornado in that area -- too close to the mountains. About 4:30 p.m. the next day, a three-pronged tornado hit the western edge of Loveland, traveling about one and one-half miles northeast through a trailer park, a major highway, and a business and residential section causing injury to about 19 people and damages in excess of a half million dollars. But this was merely a minor prelude to Nature's rampage.

### The South Platte River Basin

During the late evening of June 14th and up to 5:00 p.m. the afternoon of June 15th, thunderstorms occurred in a band across the northern part of the state from Fort Collins to Julesburg. Reported intensities varied from three inches in 15 minutes to .95 of an inch in 30 minutes, with total rainfall ranging from 1.40 inch to six inches.

About 3:00 p.m. on the 16th, a tornado accompanied by hail and rain hit the Palmer Lake Divide moving north and east across West and East Plum Creeks, past Larkspur and Castle Rock, then across the western and lower part of Cherry Creek with a tornado touching down and damaging the Valley Country Club south of the Cherry Creek Reservoir, and the storm then moved eastward across Tollgate, Sand, and Comanche Creeks.

In the Denver area, car radios were being turned on by people as they began their way home from work. At least one radio station began broadcasting the report that a wall of water was racing down the South Platte River and that, if true, it could result in major damage in areas near the river. At the State Engineer's Office, attempts were being made to locate the source of this so-called wall of water, but all was reported normal at the headwaters of the South Platte. By 5:30 p.m., however, families and businesses resident near the South Platte River had only a few hours to prepare for the rapidly-approaching spectre representing death and destruction.

As the flood crest proceeded down East Plum Creek through Larkspur, railroad and highway grades and bridges were ripped out, inundating the flood plain and farm and road equipment as it tore into Castle Rock. At Castle Rock, homes, house trailers, trucks and cars were added to the flood crests of West Plum Creek and the South Platte River which, as it approached Littleton, was estimated at 200 feet wide and 20 feet high, moving at ten miles an hour. Combined flows in the South Platte River were estimated at between 36,000 and 44,000 cubic feet per second when it hit the low-lying areas of Littleton about 9:30 p.m. the night of June 16th.

By this time, the people in the lower sections in Littleton had been evacuated, but the flood-swollen river swept up countless house trailers, horse trailers, cars, homes, and business properties. This debris is believed to have at least doubled the flood crest and was responsible for battering away several bridges downstream as the rushing water continued through the Denver area. For the next four to five hours, flood waters tumbled and roared, wiping out or covering all of the flood-plain areas from Littleton to the 15th Street Viaduct in west Denver. All of the highway and railroad bridges and most of the water, sewer, power, and telephone utilities were knocked out. Power shorts caused numerous fires that could not be reached, much less fought, by men and equipment.

While the flood devastation was descending on Metropolitan Denver, the adjacent stream to the east, Cherry Creek, was flowing approximately 58,000 cubic feet per second into the Cherry Creek Reservoir and overnight the reservoir level rose 15 feet, storing some 15,000 acre feet of flood inflow. Had the Cherry Creek Dam and Reservoir not been constructed, the Army Corps of Engineers estimated that the flood discharge from Cherry Creek combined with the discharge from Plum Creek would have produced a peak discharge on the South Platte River in central Denver of approximately 65,000 cubic feet per second, or almost twice as much as the actual flood peak, and would have caused an additional 130 millions of dollars in damages.

Further to the east, Sand Creek, together with Tollgate Creek, caused substantial damage through the north part of Aurora and Commerce City, but this water reached the South Platte River and was dispersed downstream hours before the Plum Creek flood crest hit Denver. The flood damages downriver from Commerce City, though high, would have been of a decreasing nature except for the rains occurring on Thursday, June 17th.

Rains continued to fall, swelling the stream flow in tributaries of the South Platte River to the east and to the north of Denver. The West Middle and East Bijou Creeks, with estimated peaks of 70,000 cubic feet per second on June 16th and 200,000 cubic feet per second on the 18th at Wiggins, together with Beaver and Badger Creeks, produced heavy damages to the towns of Agate, Wiggins, Deer Trail, and Byers while taking out all of the county, state, and federal roads and railroads on their march to join the flood crest on the South Platte River in the vicinity of Fort Morgan on Friday, June 18th.

About noon on Friday, Fort Morgan and Brush were isolated except by air and water by flood crests 30 feet high, covering up to three miles in width, with an estimated peak flow of 100,000 cubic feet

per second. Still inundating the flood plain and the low lying areas, the flood passed Sterling, Crook, Ovid, and finally Julesburg with a peak flood of 37,000 cubic feet per second early the morning of June 20th.

Thus the most devastating flood in Colorado's history left the state, but its effects were far from over. As a congressional report indicated, this flood had left behind the following estimated damages for Colorado:

| <u>Damage Category</u>    | <u>Metropolitan Denver Area</u> | <u>Remainder of South Platte Basin In Colorado</u> | <u>Total</u>  |
|---------------------------|---------------------------------|--|---------------|
| Residential               | \$ 9,000,000                    | \$ 1,051,000                                       | \$ 10,051,000 |
| Commercial Property       | 14,045,000                      | 692,000  | 14,737,000    |
| Industrial Property       | 47,698,000                      | 119,000  | 47,817,000    |
| Municipal                 | 3,022,000                       | 1,015,000  | 4,037,000     |
| Highway                   | 2,770,000                       | 14,785,000   | 17,555,000    |
| Railroads                 | 80,500,000                      | 4,350,000  | 84,850,000    |
| Utilities                 | 4,414,000                       | 2,938,000  | 7,352,000     |
| Agriculture               | 2,135,000                       | 38,269,000   | 40,404,000    |
| Other                     | 2,688,000                       | 1,186,000  | 3,874,000     |
| Subtotal (Direct Damages) | \$166,272,000                   | \$ 64,405,000                                      | \$230,677,000 |
| Indirect Damages          | \$155,423,000                   | \$ 11,534,000                                      | \$166,957,000 |
| TOTAL                     | \$321,695,000                   | \$ 75,939,000                                      | \$397,634,000 |

SOURCE: "The Colorado and Kansas Floods of 1965," Report of the Special Subcommittee to Inspect Flooded Areas in Colorado and Kansas to the Committee on Public Works, House of Representatives, House Committee Print No. 15, U.S. Government Printing Office, Washington: 1965, p.13. This report notes:

- "1. The nature and degree of preliminary estimates compiled to date currently indicate that total flood damages for the South Platte River Basin may approximate \$500,000,000 when more detailed surveys are completed.
- "2. Flood damages incurred in the basin during the flood period of July 23-26 are not included in the above estimates."

Table I expresses the results of this flood in terms of lives lost, injuries suffered, and property lost. For the South Platte River Basin as a whole, more than 3,500 families suffered losses, including 11 deaths, 206 dwellings destroyed, 155 trailers destroyed, 142 farm buildings destroyed, and 516 small business destroyed or with major damage.

The full impact of the magnitude of this flood perhaps can be realized when the flood peaks of the week of June 14th are compared with previous record peaks. On the basis of preliminary estimates submitted to the Special Subcommittee of the U.S. House Committee on Public Works, the flood peak on Plum Creek at Louviers totaled 146,000

Table I

DEATHS, INJURIES, AND PROPERTY LOST, SOUTH PLATTE RIVER BASIN BY COUNTY<sup>1</sup>

|  | Adams   | Arapahoe | Denver  | Douglas | Elbert  | Larimer  | Lincoln | Logan   | Morgan  | Sedgwick | Washington | Weld    | Total            |
|--|---------|----------|---------|---------|---------|----------|---------|---------|---------|----------|------------|---------|------------------|
| <u>Persons:</u>                        |         |          |         |         |         |          |         |         |         |          |            |         |                  |
| Dead                                   | -0-     | 2        | 4       | 1       | -0-     | 1        | -0-     | -0-     | -0-     | -0-      | -0-        | 3       | 11               |
| Injuries or illnesses                  | -0-     | 145      | 150     | 6       | -0-     | 20       | -0-     | 5       | -0-     | -0-      | -0-        | 1       | 327              |
| Hospitalized                           | -0-     | 6        | 15      | 1       | -0-     | 7        | -0-     | -0-     | -0-     | -0-      | -0-        | 1       | 30               |
| <u>Dwellings:</u>                      |         |          |         |         |         |          |         |         |         |          |            |         |                  |
| Number destroyed                       | 1       | 52       | 114     | 21      | -0-     | 3        | -0-     | 7       | 5       | -0-      | -0-        | 3       | 206              |
| No. with major damage                  | -0-     | 151      | 225     | 62      | 40      | 15       | 10      | 25      | 5       | -0-      | -0-        | 12      | 545              |
| No. with minor damage                  | 25      | 202      | 762     | 145     | -0-     | 75       | 18      | 200     | 20      | 25       | 3          | 252     | 1,727            |
| Avg. home replacement cost             | \$5,000 | \$8,000  | \$8,000 | \$8,000 | \$7,000 | \$15,000 | \$7,000 | \$8,000 | \$8,000 | \$6,000  | \$6,000    | \$4,000 | \$7,2622         |
| <u>Trailers:</u>                       |         |          |         |         |         |          |         |         |         |          |            |         |                  |
| Number destroyed                       | -0-     | 58       | 59      | 10      | -0-     | 27       | -0-     | -0-     | -0-     | -0-      | -0-        | 1       | 155              |
| No. with major damage                  | 7       | 72       | 46      | 17      | -0-     | 40       | -0-     | 10      | 1       | -0-      | -0-        | 16      | 209              |
| Approx. % insured                      | 75%     | 75%      | 75%     | 50%     | -0-     | 75%      | -0-     | -0-     | 50%     | -0-      | -0-        | 10%     | 60% <sup>2</sup> |
| <u>Farm Buildings:</u>                 |         |          |         |         |         |          |         |         |         |          |            |         |                  |
| Number destroyed                       | 8       | 16       | -0-     | 34      | 20      | 5        | 14      | 20      | 10      | 10       | -0-        | 5       | 142              |
| No. with major damage                  | 10      | 18       | -0-     | 19      | 40      | 10       | 32      | 75      | 20      | 25       | -0-        | 6       | 255              |
| <u>Small Business:</u>                 |         |          |         |         |         |          |         |         |         |          |            |         |                  |
| Number destroyed and with major damage | -0-     | 49       | 398     | 31      | -0-     | 5        | -0-     | 20      | -0-     | 8        | -0-        | 5       | 516              |
| <u>Total Families</u>                  | 45      | 605      | 1,756   | 210     | 60      | 170      | 30      | 292     | 41      | 40       | 3          | 293     | 3,545            |
| <u>Suffering Loss:</u>                 |         |          |         |         |         |          |         |         |         |          |            |         |                  |

1. Information compiled by the American Red Cross.  
 2. For Both South Platte and Arkansas River Basins.

cubic feet per second compared to a previous record peak of 3,800 cubic feet per second. The South Platte River at Denver peaked with a flow of 36,000 c.f.s. on June 17th while the previous record high was 22,000 c.f.s. in September, 1933, and at Balzac the peak flow was estimated at 55,000 c.f.s. on June 18th compared to the previous record peak of 31,200 c.f.s. in June, 1921. Possibly the most unbelievable peak occurred at the mouth of Bijou Creek which had an estimated flood peak on June 18th of 300,000 c.f.s. in contrast to no previous recorded peak.

### The Arkansas River Basin

Thunderstorms late in the afternoon of Monday, June 14th, followed by hail measuring up to the size of baseballs, resulted in an estimated \$500,000 worth of damages to El Paso County roads, highways, and bridges and to homes in Stratmoor Hills, Stratmoor Meadows, and Security Village south of Colorado Springs. Downstream, the City of Fountain suffered very little in damages from this storm which had an estimated total rainfall of four inches.

During the next few days, however, a series of showers and thunderstorms in the Arkansas River watershed produced flooding in many of the river's tributaries. The afternoon of Thursday, June 17th, more than 12 inches of rain fell at Falcon, with intensities of seven and three-fourths inches in three hours, causing damages from Falcon to Peyton, and producing flooding on Black Squirrel, Minny Camp, and Sand Creeks, tributaries of Fountain Creek and the Arkansas River, and, to the east, Big Sandy Creek which enters the Arkansas River at Lamar.

The flood proceeded down the Arkansas River fed by crests out of Black Squirrel and Horse Creeks from the north and Crooked Arroyo and Muddy Creeks on the south. By the time the floods on Fountain Creek had joined the Arkansas River at Pueblo and proceeded to the Pueblo County line, extensive damages had been sustained and an estimated peak flow of 186,000 c.f.s. was attained.

Below Pueblo, a flood crest from the Purgatoire River joined the flooding Arkansas River and the rampaging waters moved eastward. Fortunately, the combined water from these floods was contained in the John Martin Reservoir, totaling an estimated 280,000 acre feet.

Downstream from the John Martin Reservoir, thunderstorms starting with a two-inch rain the 14th of June on Crooked Arroyo Creek were followed by additional storms on the 15th, 16th, and 17th falling on nearly every watershed south and some of those north of the Arkansas River. Rainfall varying from five inches to 15 inches was reported over a 40-hour period. At Holly the Arkansas River was reported to have had flood crests of 160,000 c.f.s. The towns of Lamar, Koen, Granada, and Holly were inundated by depths up to four feet over most of the town areas.

A total of 43 million dollars in damages was estimated for the Arkansas River basin in Colorado by the Army Corps of Engineers, with the John Martin Reservoir being credited with preventing an additional \$3,500,000 in damages. As pointed out in Table II, based on information compiled by the American Red Cross, ten persons died as a result

Table II

DEATHS, INJURIES, AND PROPERTY LOST, ARKANSAS RIVER BASIN BY COUNTY<sup>1</sup>

|  | <u>Bent</u> | <u>Cheyenne</u> | <u>Crowley</u> | <u>El Paso</u> | <u>Kiowa</u> | <u>Las Animas</u> | <u>Otero</u> | <u>Prowers</u> | <u>Pueblo</u> | <u>Total</u>     |
|--|-------------|-----------------|----------------|----------------|--------------|-------------------|--------------|----------------|---------------|------------------|
| <u>Persons:</u>                        |             |                 |                |                |              |                   |              |                |               |                  |
| <u>Dead</u>                            | -0-         | -0-             | -0-            | 2              | -0-          | -0-               | -0-          | 6              | 2             | 10               |
| Injuries or illnesses                  | -0-         | -0-             | -0-            | 51             | -0-          | -0-               | 22           | 150            | 55            | 278              |
| Hospitalized                           | -0-         | -0-             | -0-            | 4              | -0-          | -0-               | -0-          | 23             | 1             | 28               |
| <u>Dwellings:</u>                      |             |                 |                |                |              |                   |              |                |               |                  |
| Numbered destroyed                     | 2           | -0-             | -0-            | 8              | -0-          | -0-               | 8            | 9              | 16            | 43               |
| Number with major damage               | 5           | 4               | 4              | 20             | 8            | -0-               | 38           | 122            | 107           | 308              |
| Number with minor damage               | 10          | 14              | 10             | 250            | 10           | 7                 | 113          | 1,317          | 393           | 2,124            |
| Avg. home replacement cost             | \$5,000     | \$7,000         | \$6,000        | \$14,000       | \$7,000      | \$6,000           | \$7,500      | \$5,000        | \$5,000       | \$7,262          |
| <u>Trailers:</u>                       |             |                 |                |                |              |                   |              |                |               |                  |
| Number destroyed                       | 2           | -0-             | -0-            | -0-            | -0-          | -0-               | 1            | 15             | -0-           | 18               |
| Number with major damage               | -0-         | -0-             | -0-            | -0-            | -0-          | -0-               | 10           | 117            | 17            | 144              |
| Approx. % insured                      | -0-         | -0-             | -0-            | -0-            | -0-          | -0-               | 50%          | 95%            | 50%           | 60% <sup>2</sup> |
| <u>Farm Buildings:</u>                 |             |                 |                |                |              |                   |              |                |               |                  |
| Numbered destroyed                     | 5           | 8               | 4              | 121            | 4            | -0-               | 22           | 10             | 10            | 184              |
| Number with major damage               | 15          | 16              | 8              | 10             | 6            | 5                 | 41           | 25             | 20            | 146              |
| <u>Small Business:</u>                 |             |                 |                |                |              |                   |              |                |               |                  |
| Number destroyed and with major damage | 10          | 4               | -0-            | -0-            | -0-          | 1                 | 28           | 72             | 35            | 150              |
| <u>Total Families Suffering Loss:</u>  | 45          | 46              | 26             | 285            | 28           | 10                | 215          | 1,662          | 530           | 2,847            |

1. Information compiled by the American Red Cross.  
 2. For both Arkansas River and South Platte River Basin.

of the storms, and 43 homes, 18 trailers, and 184 farm buildings were destroyed. One hundred fifty small businesses were destroyed or received major damage. Over-all, a total of 2,847 families in the Arkansas River Basin suffered losses.

Disaster Relief and Recovery Operations

During this period of emergency, cooperation of the highest type was evidenced by state, federal, and local officials, and emergency public safety and relief operations were underway in Colorado before the flood waters had begun to subside. Before the flood waters hit the populated areas, law enforcement personnel were busy removing residents of low-lying areas to safety and, in Denver, also were faced with the problem of coping with large crowds of sightseers. In this latter connection, for example, substantial police efforts were required to remove a crowd estimated to total at least 5,000 persons whose misplaced sense of curiosity had brought them to Denver's Overland Park Golf Course for a close-up view of the on-rushing flood waters of the South Platte River. Had these people not been removed to higher ground before the flood crest reached the area, they assuredly would have had a close-up view; the Overland Park Golf Course was totally inundated with the exception of one fairway next to Santa Fe Drive and the flood waters ranged, for the most part, from five to 15 feet in depth.

National Guard

At the state level, emergency measures were being taken by a number of departments under the direction of the governor. The National Guard served as the operations center for funneling needed supplies and equipment to areas hard-hit by the floods, and members of the National Guard were used to assist local law enforcement personnel with maintaining the public peace and safety.

Cost figures connected with flood disaster work totaled \$126,304. Of this amount, \$65,789 was expended for pay and allowances for National Guard troops for 6,853 man days; \$60,415 was spent for military aircraft and helicopter operations; and \$100 was spent for napalm used for dead animal disposal.

Since approximately 50 per cent of the National Guard personnel used for flood duty were on active duty status for summer training at the time, their cost was paid by the federal government. The federal government also paid the entire \$60,415 cost for aircraft and helicopter operations so that the actual expense to the state totaled \$28,749.04, as follows:

| <u>Object</u>                    | <u>Amount</u> |
|----------------------------------|---------------|
| Pay and allowances for personnel | \$ 23,927.80  |
| Rations                          | 3,903.22      |
| Fuel                             | 330.15        |
| Repairs                          | 10.15         |
| Miscellaneous                    | 135.72        |
| Medical                          | 442.00        |
| TOTAL                            | \$ 28,749.04  |

## State Patrol

During the emergency, the State Patrol cooperated and coordinated its efforts with the State Highway Department and civil defense personnel. The biggest problem the patrol faced during the floods was caused by the loss of its electrical power in Denver. An auxiliary power plant was used when the patrol station lost its commercial power, but this plant had to be shut down when water began filling the basement of the highway department's building where it was located.

Another problem faced by the State Patrol involved rerouting traffic. Under ordinary circumstances, county roads can be used for rerouting traffic around damaged roads and bridges, but in many areas the flooding waters had also washed out county roads and bridges as well as the main highways. The commander at Fort Carson responded to a request from the State Patrol for assistance by providing six helicopters to remove persons stranded because of washed-out bridges. The patrol also received assistance from private highway contractors in the form of six light plants, and, with these plants to illuminate major highway intersections, the patrol was able to man these intersections with only one rather than several patrolmen.

## State Highway Department

The floods also posed unusual problems for the State Highway Department. Normally, in localized areas of highway damage, the department is able to effect temporary repairs using its local forces, but in this particular instance the damage was of such magnitude and was dispersed over such a wide area that it became necessary to utilize the resources of private contracting firms and practically any other group which had the necessary equipment, materials, and manpower. Following arrangements for temporary repairs, the department began contracting for the rebuilding of permanent highway structures. The department temporarily used private consulting engineers on a contract basis, and also used many old blueprints as guides to the reconstruction of the washed-out bridges.

## State Department of Public Welfare

With the permission of the federal government, the State Department of Public Welfare distributed a portion of its food surplus commodities to flood victims upon a written statement of need; because of the emergent situation, no home visits or other proof of need was required. Other distributions were made directly to the American Red Cross and the Division of Civil Defense for mass-feeding purposes. Although many private agencies tried to determine needs of the flood victims and requested assistance from the department, state officials did not respond to these requests unless they had been approved by local county welfare officials. According to the state welfare director, the welfare rolls had not been affected five weeks after the floods; the group that the department originally expected to request assistance did not appear and apparently became employed in the clean-up operations. There were a number of welfare recipients living in the low-lying, flooded areas, and the department helped some of these to relocate. However, many choose to return to their flood-damaged homes.



## State Department of Public Health

The State Department of Public Health's first action in connection with the floods involved one of its 48 packaged disaster hospitals. Ironically, the hospital had been set up at Castle Rock on June 16th for a training exercise on how to care for patients in a disaster. A tornado hit the Silver Heights area north of Castle Rock before the hospital had been dismantled for recrating, and one victim of the tornado was treated for lacerations that afternoon. The department ordered the hospital left up for use, if needed, and 25 persons received emergency treatment in the facility during the next several days.

As soon as the flood waters hit, the department dispatched sanitary engineers, sanitarians, and chemists to assist local health departments in testing and chlorinating water supplies and obtaining safe drinking water. In communities where no organized health services existed, staff members of the state department coordinated salvage and community work, making sure that flood-damaged food, drugs, and beverage supplies were destroyed; assisting with the chlorination of water supplies; administering typhoid shots, where requested; and providing consultation on rodent and insect control and the disposition of dead animals.

The department's bacteriology laboratory utilized a rapid-testing technique on water samples in order to get municipal water plants back into operation as soon as possible. This method enabled the laboratory to complete tests in 18 hours, compared with the four days normally required.

The department provided informational material for flood areas on personal health protective measures, including immunization procedures, handling and disposal of solid wastes, mosquito and fly control, disinfection of contaminated water wells, salvaging contaminated foods, etc. With the help of insect specialists from the U.S. Public Health Service, the department's staff surveyed the flood areas and made recommendations for emergency aerial insecticide spraying of some 140,000 acres to help control a build-up of mosquitoes and avert encephalitis, a disease transmitted by mosquitoes to humans and to horses. Following approval by the governor, this spraying program was conducted under the supervision of the State Department of Agriculture. An extensive rat extermination program in the Arkansas Valley was also undertaken by the public health department through the U.S. Bureau of Sport Fisheries and Wildlife.

After the flood waters had subsided, health department engineers conducted on-the-site inspections of sewage facilities in 42 communities and water plant facilities in 37 communities. Estimated damages to these facilities totaled \$4,352,331.

## Savings and Loan Commissioner

Because of the economic devastation accompanying the floods, three state offices were directly concerned with the programs under their operations -- the Insurance Commissioner, the State Bank Commissioner, and the Savings and Loan Commissioner.

A survey conducted by the Savings and Loan League of Colorado in regard to mortgaged homes destroyed or damaged by the floods revealed that 13 of the 34 associations in the Denver metropolitan area held mortgages on damaged or destroyed homes. The final loss to the associations will probably approach \$5,000,000 since mortgages on these homes will be or have been cancelled, or an association takes over the property and cancels the remaining indebtedness.

In this connection, in cases of total loss, the associations reduced the mortgage or indebtedness to the value of the land. For example, a \$10,000 mortgage which covered an \$8,000 home and a \$2,000 plot of land would be reduced to \$2,000; the monthly payment would be reduced where the owner wished to retain the plot, and the associations would take title to a plot and cancel the indebtedness where the owner did not wish to retain the land. In cases of partial loss, mortgage payments were deferred from 90 days to six months. Occasionally, where the Small Business Administration was involved with repair loans, the associations reduced the amount of the mortgage by the amount of the S.B.A. loan or rehabilitation cost.

### Insurance Commissioner

In regard to actions of the insurance industry after the flood waters receded, the Insurance Commissioner reported that, almost without exception, life insurance companies deferred premium payments due from persons whose property had been damaged or destroyed by the floods. These companies also arranged immediate loans of cash values without the usual home office delays caused by red tape, and most of the mortgage agencies declared a moratorium on home mortgage payments. In addition, casualty insurance companies brought in their top adjusters to assist homeowners insured against damages from hail, fire, etc., and many adjusters provided assessment of damages to noninsured homeowners.

As far as flood insurance coverage is concerned, almost 100 per cent of the residences damaged were not covered. However, almost all passenger vehicles were covered with the comprehensive portion of automobile insurance. Similarly, many commercial vehicles were covered by insurance and, for the most part, house trailers were covered by the extension of the automobile comprehensive coverage. Some other house trailers were covered by blanket mortgage insurance. Generally, commercial buildings were not covered by insurance except for those buildings owned by national firms, such as May D&F, that had insurance covering the contents of their many buildings across the country.

The Insurance Commissioner believes that there may be flood insurance in the future for property owners who cannot now purchase protection against this risk. The National Association of Insurance Commissioners has appointed a hurricane and flood committee to consider the feasibility of optional or mandatory flood insurance coverage. Federal legislation would be necessary in order to allow the insurance industry to establish flood insurance protection, either to provide a temporary subsidy to an insurance pool until it contains a given amount, similar to subsidies provided F.D.I.C. and F.H.A. pools, or to prevent the pool's participating companies from being subjected to antitrust suits, or both.

In regard to coverage, this N.A.I.C. committee is thinking in terms of a \$25,000 to \$50,000 maximum protection provision with a \$500 deductible feature, and it is also examining the possibility of a 90-10 coinsurance plan. Coverage would include flood as well as surface waters; waves along seashores; tidal water and waves; stream overflows; and water spray, wind-driven or otherwise. The coverage would also insure against backed-up sewer water; subsurface waters, either from flows or leakage; landslides caused by water; and wind-driven rains. The rate for this type of insurance, if compulsory, would probably be about four cents per \$100 of coverage, depending on the type of construction, and would probably increase the annual premium for the average homeowner by five to ten dollars.

In addition to the study by the National Association of Insurance Commissioners, an article in The Wall Street Journal, October 10, 1965, reports that Congress is considering a plan to aid future victims of floods and hurricanes, with final action thereon probably being taken in 1966. However, as the article points out, once before, in 1956, Congress authorized creation of a flood indemnity fund, built on an insurance framework under which persons seeking protection would pay 60 per cent of the premium and 20 per cent each would be paid by the federal and state governments. But the Federal Flood Indemnification Administration, which was established to run the program, quickly became mired in rate-setting quarrels, and when it requested an appropriation of \$500 million in 1957 merely to start the program, the House Appropriations Committee balked. Without any funding, the program perished.

#### State Bank Commissioner

The State Bank Commissioner reported that a day or two after the flood, representatives of all financial institutions in the Denver area were invited to attend a meeting to discuss ways and means of assisting individuals and business firms that had incurred losses as a result of the flood. Several representatives of the Small Business Administration were present to explain the position of that institution and the part the S.B.A. could take in making funds available to flood victims by granting direct loans, participating in loans, or by guaranteeing loans made by other lending institutions.

Small Business Administration disaster loans are available to individuals, business concerns, and nonprofit organizations such as churches. However, farmers and stockmen are not eligible; they must go to the F.H.A. or P.C.A. for financing. The purpose of the disaster loans is to restore a victim's home or business property to its pre-disaster condition, as nearly as possible, and such loans may be used to repair or replace damaged furniture or other household belongings as well as real estate. The loans are made at interest rate of three per cent per annum and may have a maturity date of up to 20 years.

In some instances the banks participated in these disaster loans; in others, they advanced all of the funds and the S.B.A. guaranteed up to 90 per cent of the funds loaned. Practically all of the banks had employees available to assist in preparing applications for direct loans from the S.B.A., and in some instances, notably the larger banks, a moratorium was declared on existing debts. Wherever possible, direct loans from banks were made available to disaster victims.

Several banks informed the commissioner that they received a great deal of cooperation from national concerns, manufacturers, and suppliers, and that these companies had been extremely generous in supplying new inventories when the banks could help in this respect. The banks then could supply operating funds and, as a result, the businesses were able to resume operating quickly.

The industrial banks in Denver and the metropolitan area also took immediate action to assist flood victims. Some of these institutions waived payments on existing debts for periods up to six months; low interest rate loans were made available to repair homes; maturity dates on notes were lengthened and additional funds advanced to flood victims; interest-free loans of up to \$500 were made available; and these institutions cooperated with the American Red Cross in cases where individuals incurred a total loss of their property. Repossessed furniture was donated to families whose household belongings had been destroyed and, in several instances, furniture dealers financed by industrial banks sold furniture to flood victims at cost.

Since credit unions are limited to making loans to members only, their ability to assist in an emergency is restricted. However, in those instances where credit union members were victims of the floods, the organizations involved advanced funds to help the members, and one large credit union was prepared to absorb the loss on three real estate loans on homes owned by members.

The consumer finance industry was also reported by the State Bank Commissioner as contributing substantially in the effort to aid flood victims. Some of the larger companies instructed their local offices to extend credit to flood victims on liberal terms; one company immediately set up a clothing distribution center, with clothing being donated by its employees; interest-free loans were made, usually for about \$300, although some loans as high as \$1,000 for 25 months were made to flood victims. In order to assist their customers, some companies granted extensions without additional charges and waived interest on existing debts. The finance companies also reported that they received a great deal of cooperation from the American Red Cross and the Salvation Army in aiding flood victims.

The losses resulting from the floods were widely distributed, and no individual bank or other lending institution had a large number or a large volume of loans to individuals or firms in the disaster areas. The State Bank Commissioner reported that the banks were in sound condition and well capitalized and, with a few exceptions, had adequate reserves to absorb resulting losses. There are problems in some of the smaller institutions, however, and it may take several years to work out the loans made to aid the flood victims. Also, several banking institutions were victims of the flood -- in Byers, Lamar, Granada, and Holly where losses of equipment and records were incurred. Regardless of this misfortune, however, they continued to serve the people in their communities, and the Holly bank continued its operations from a school building after the flood. Some of these banks indicated that, over a period of time, the over-all effect of the disaster will prove to be more beneficial to their economy than detrimental, and this is particularly true in those areas where drought conditions existed prior to the floods. As a result of the moisture, crop prospects improved, grass became available for livestock, and

unemployment actually decreased because of the jobs available in cleaning up and rebuilding where there was damage.

After being contacted by the State Bank Commissioner, federal supervisory agencies reported that they would be as tolerant with the banks as possible and would cooperate in any way possible in regard to loans being made to flood victims. That is, these agencies did not want to be in a position where they must restrict the banks in granting credit or insist that the banks charge off their disaster loans, some of which were made under rather liberal terms.

### American Red Cross

After the floods, 130 paid staff members of the American Red Cross, assisted by thousands of volunteer workers, concentrated on relief efforts in Colorado. According to the Red Cross' national requirement with respect to a disaster, there must be five or more families affected before the Red Cross is legally obligated to provide assistance. Under this definition, some 400 disasters occur in the United States each year.

The role of the American Red Cross in a disaster situation is one of assisting families and individuals in six key areas: food, clothing, shelter, medical services, replacement of household furnishings, and replacement of occupational supplies and equipment. Only outright grants may be made by the Red Cross, and some \$1,750,000 in funds were budgeted for Colorado flood victims.

### Flood Control Projects

The State of Colorado does not engage in the construction of flood control projects as such. The Colorado Water Conservation Board serves as the focal body for the state with respect to water and water conservation projects, and in this connection functions as the central agency for all such projects in this state, including federal projects. Thus, proposed projects involving dams in Colorado by the Game, Fish, and Parks Department, the State Engineer's Office, the Soil Conservation Service, the U.S. Bureau of Reclamation, and the Army Corps of Engineers are funneled through the Colorado Water Conservation Board where the proposals are reviewed as to their over-all effects and not merely on the matter of flood control.

At the federal level, the Army Corps of Engineers is charged with the primary responsibility for flood control works. However, the Corps works closely with the Bureau of Reclamation and the Soil Conservation Service when its advice is requested in regard to flood control potentials of their projects. Similarly, if the Corps has a project including irrigation as well as flood control purposes, it receives advice and assistance from the Bureau of Reclamation.

### South Platte River Basin

As a result of the June floods, considerable public attention has been given three proposed projects on the South Platte River Basin -- the Two Forks Dam and Reservoir, Chatfield Dam and Reservoir,

and the Narrows Dam and Reservoir. Map 1 provides an illustration of the locations of the Two Forks and Chatfield proposals, and Map 2 provides similar information on the Narrows Project.

Two Forks Proposal. The Two Forks Dam and Reservoir is in the planning stage only, under the responsibility of the Bureau of Reclamation. The bureau reports that the site for this project would be located about a mile downstream from the confluence of the North Fork and the South Platte River, some 25 airline miles upstream of Denver. The total storage capacity of the Two Forks Reservoir site could be as much as 1,200,000 acre feet to amply provide for all conservation and flood control requirements. It could provide protection for the Denver water works at Kassler, and it would relieve the Chatfield site of nearly all need for the storage of flood flows originating in the North and South Forks of the river.

A reconnaissance report was completed in November of 1964. The investigation and report were made possible by funds advanced by the State of Colorado and interested water-user organizations and entities, acting through the Colorado Water Conservation Board, under contract with the Bureau of Reclamation. The feasibility investigation and an authorizing report for the Two Forks Dam and Reservoir is expected to be completed for presentation to the Congress simultaneously with the report by the Corps of Engineers on the Chatfield Dam and Reservoir.

Chatfield Dam. As may be noted on Map 1, the Chatfield damsite is located south of Littleton, just below the confluence of Plum Creek and the South Platte River. This project has been authorized for construction by the Corps of Engineers, and the Corps is making a feasibility study on the Chatfield Project which it expects to complete by the first of 1966. If appropriations are made by Congress, land acquisition could start by the middle of 1967 with completion anticipated by the middle of 1969. So far as the past is concerned, opposition by local interests in the reservoir site to the construction of the dam and reservoir in 1954 caused indefinite postponement of any further activity towards construction by the Corps of Engineers.

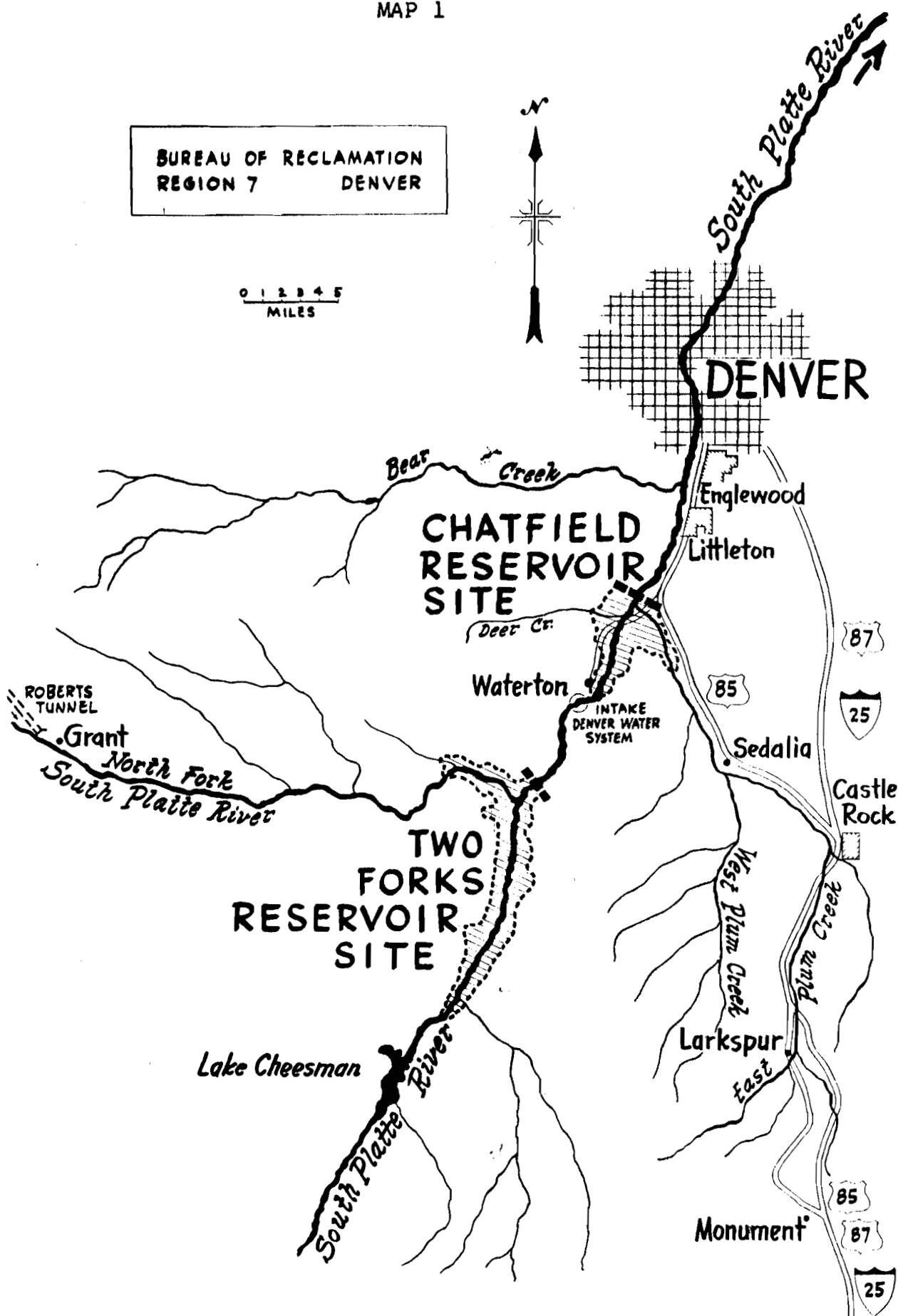
Narrows Dam. The Narrows Unit, proposed for reauthorization and construction by the Bureau of Reclamation, consists of the potential Narrows Dam and Reservoir on the South Platte River about seven miles upstream from Fort Morgan, approximately 70 air miles northeast of Denver.

The Narrows Dam and Reservoir was authorized as a unit of the comprehensive Missouri River Basin Project by the flood control acts of 1944 and 1946. Preconstruction activities were initiated in 1947 and a definite plan report was prepared in 1951. Public hearings were held in 1951 which indicated considerable opposition to the plan, principally from residents located in the reservoir area. As a result of the lack of official support by the State of Colorado, all activities on the dam and reservoir were terminated.

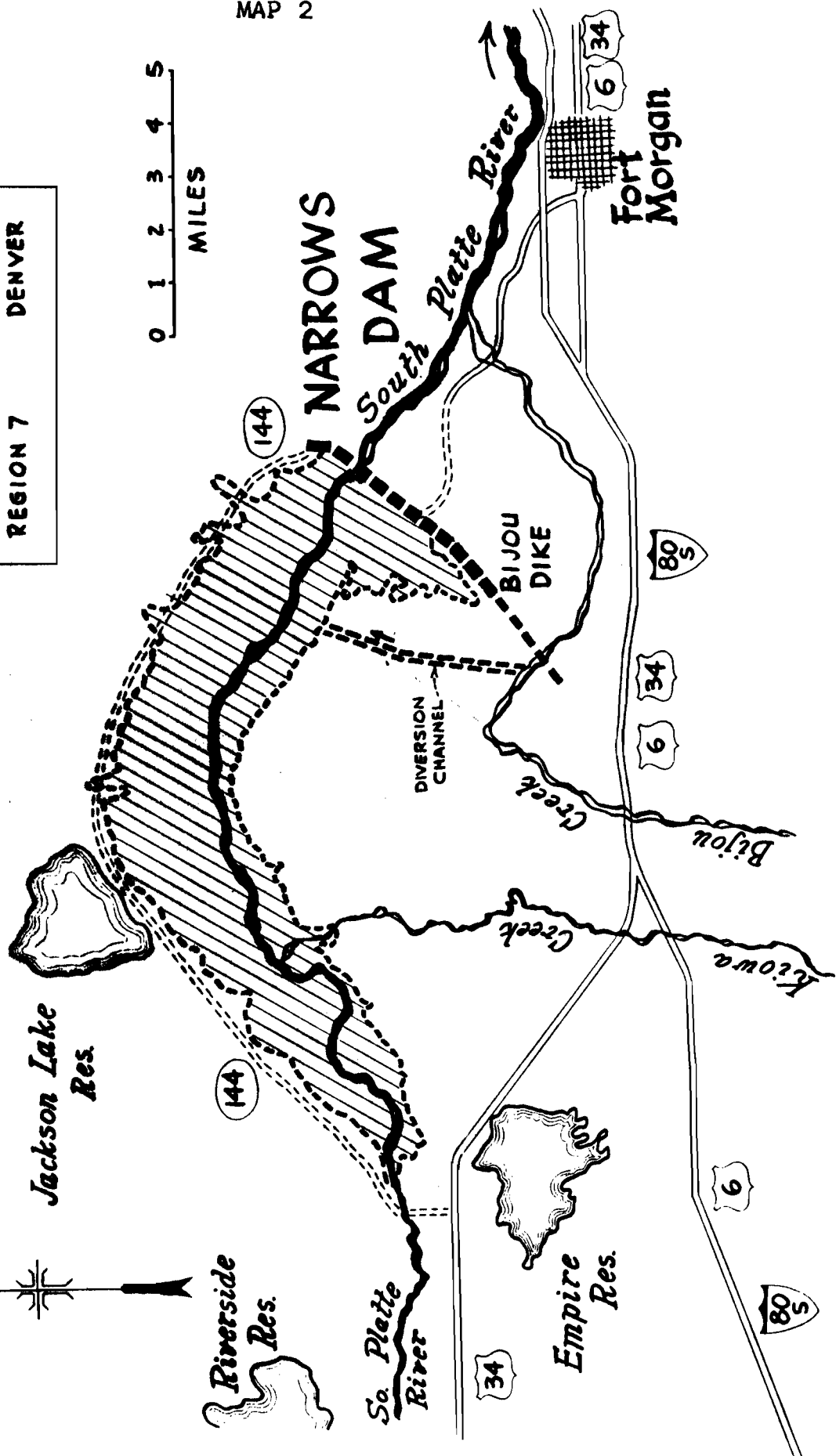
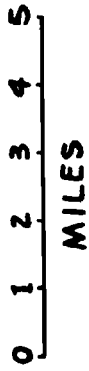
During the intervening years, many discussions and meetings of interested groups were held, a steering committee was organized, and the Colorado Water Conservation Board provided funds for the resumption of studies on the project by the Bureau of Reclamation. The bureau was specifically requested to make a hydrologic study and cost

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comparison of an upstream site in Weld County. The studies and discussions culminated in a meeting of the Colorado Water Conservation Board in Fort Morgan on September 11-12, 1964, at which time the board officially approved the recommended Narrows site depicted on Map 2.

The Narrows Dam and Reservoir would be a multiple-purpose facility serving the functions of irrigation, flood control, recreation, fish-wildlife propagation, and possibly municipal water supply. Operation of the Narrows Reservoir would be integrated and coordinated with the operation of all upstream reservoirs, and, as the terminal reservoir on the South Platte River in Colorado, the Narrows Reservoir would be able to capture and store flows that otherwise would largely be wasted. The bureau reports that it is well along with this project, and it expects to submit a report thereon to Congress early in calendar year 1966.

### Arkansas River Basin

Two projects are scheduled for construction in the Arkansas River Basin which would, among other things, provide added flood control protection for that area. In addition, as part of the continuing consideration of the over-all water problems of the area, the Corps of Engineers is reviewing the advisability and feasibility of a system of flood control dams along the numerous tributaries feeding into the Arkansas River.

Pueblo Dam. As part of the Fryingpan-Arkansas Project, the Bureau of Reclamation will construct the Pueblo Dam and Reservoir approximately six miles west of the city. This dam will be 180 feet high and 10,600 feet long and will impound approximately 400,000 acre feet of water -- 290,000 for conservation, 100,000 for flood control, and 10,000 for dead storage. Flood damage between the Pueblo damsite and John Martin Reservoir is presently estimated at \$708,000 annually, although the 1965 flood greatly exceeded this figure. The bureau estimates that the Pueblo Dam and Reservoir will eliminate about 66 per cent of this damage. Construction of the dam and reservoir is scheduled to begin in September of 1968 and the project will take three years to complete.

Trinidad Dam. On July 3, 1958, the Trinidad Project was authorized for construction by the Corps of Engineers. This project is located along the Purgatoire River in Las Animas County not far from the Colorado-New Mexico border, with the damsite being about two miles southwest of the City of Trinidad. The Trinidad Reservoir, when completed, will have a total capacity of 114,500 acre feet of which 51,000 is allocated to flood control, 20,000 for irrigation, 4,500 for a permanent fishery pool, and 39,000 for sediment retention. Funds have been appropriated for the beginning construction work which will start as soon as negotiations on the irrigation repayment contract are completed. At present, it is anticipated that this construction work will begin in fiscal year 1966.

### Soil Conservation Service

With respect to Soil Conservation Service projects, 60 applica-

tions for assistance, including three duplications, were received by the Colorado Soil Conservation Board following the June floods. Of these, 23 were approved for detailed planning leading to a work plan as part of the watershed program in Colorado under Public Law 566, and 12 of these 23 proposals have been authorized for installation. All of these would be small watershed projects, or the utilization of land conservation treatment practices in conjunction with small structures, and, while not designed as primarily flood control projects, would serve to help control stream flow.

### 1965 Special Session

Governor John A. Love called the members of the General Assembly into an extraordinary session on July 16th primarily to consider "legislation increasing the excise tax on motor and special fuels, and to provide for the expenditure of funds therefrom for the costs of the reconstruction and repair of the public highways of the State destroyed or damaged by the June and July, 1965, flood disasters." Prior to this session, the staff of the State Highway Department devoted considerable efforts to obtaining information on the flood damages to the public highways in Colorado for use by the governor in calling upon the legislative body for action.

In his message to the General Assembly on July 16th, the governor reported that damages to the public highways in this state, including county and city roads, streets, and bridges, stood in excess of \$18 million. Further, "we have estimated that \$10,245,000 will be available from federal sources. Approximately \$4½ million of this amount will be made available through the Federal Highway Act Emergency Fund on a matching basis. The balance of the federal funds will be allocated through the Office of Emergency Planning -- not on a matching basis, but under a determination of the amount necessary to accomplish temporary or emergency repairs. The hard financial facts are these: After all of these funds have been allocated, we still will need a closely estimated \$8,385,000 in state funds to finish the job." The governor then proposed that "we increase our tax on gasoline and special fuels on a temporary basis and appropriate the proceeds of such increase to a special emergency fund to be used for the purpose of repair and restoration."

In meeting this problem of emergency financing, the General Assembly closely followed the recommendations of the governor. House Bill No. 1002, 1965 special session, imposed a one-cent increase in the tax on motor fuels for a 13-month period from August 1, 1965, through August 31, 1966, with the revenue therefrom to be used for the reconstruction or repair of the public highways in this state which were destroyed or damaged by the flood disasters during the period of June 14 through July 13, 1965. In order to expedite the carrying into effect of the emergency reconstruction program, Section 4 (3), H.B. 1002, provided the State Highway Commission with the following powers:

"(a) To enter into contracts now authorized by law, and particularly pursuant to article 13 of chapter 120, C.R.S. 1963, with any county, city and county, city, or incorporated town for the reconstruction, repair, and the restoration of any public highways under their respective jurisdictions, whereby the costs thereof shall be paid in part by the state.

"(b) To establish priorities for projects submitted in said budget or to prorate available funds on the basis of the estimated costs of the state highway commission of the reconstruction, repair, and the restoration of the public highways to their former condition immediately prior to the flood disasters.

"(c) To request the issuance of anticipation warrants payable from the revenues to be derived from the increase in the excise tax imposed by this act. Such anticipation warrants shall be held by the state treasurer at interest not to exceed three per cent per annum.

"(d) To do all things necessary to expedite the reconstruction, repair, and the restoration of the public highways in this state damaged or destroyed by the flood disasters."

In keeping with the provisions of H.B. 1002, the State Highway Commission approved a budget for the Highway Disaster Relief Fund on July 29, 1965, and the governor added his approval on August 11, 1965. Under this budget, receipts from the additional one-cent motor fuels tax are estimated to total \$8,300,000. Some \$4,209,984 of this total is allocated for relief projects on the federal aid highway and non-federal aid highway systems in the state; added to this will be \$4,795,416 in federal funds.

So far as the counties and cities are concerned, the budget allocates \$3,949,726 in state funds from the emergency one-cent tax revenues for restoration work on their roads, streets, and bridges, as may be noted in Table III. Under the provisions of Public Law 875, the federal government is adding \$5,772,112 to the state funds for a total of \$9,721,838.

Over-all, on the basis of the budget allocations and the estimated revenue, the Highway Disaster Relief Fund has \$140,290 in state funds as an unallocated balance or reserve.

#### Summary of Problems Reported to Committee on Disasters

During the special session, the members of the General Assembly not only adopted the emergency one-cent increase in the excise tax on motor fuels but they also directed the Legislative Council "to conduct a study of the ways and means the State of Colorado should follow in preparing on a permanent basis to meet disasters of all types, including recommendations concerning a joint financing arrangement between the state and local governmental units coordinated at the same time with federal aid." (H.J.R. No. 1003, 1965 special session) In another joint resolution, S.J.R. No. 3, the Legislative Council was also directed "to study the additional areas of flood prevention by state agencies, flood insurance, and control of flood plain areas."

The committee created by the Legislative Council to carry out the directives contained in these two joint resolutions held several meetings to obtain information on the flood disasters in Colorado -- in Denver on July 23, August 23, September 9, and October 13, and in Lamar on August 4. Through information developed at these meetings, the committee anticipated obtaining answers to three general questions:

Table III

HIGHWAY FLOOD DISASTER RELIEF BUDGET  
FOR COLORADO COUNTIES, CITIES, AND TOWNS\*  
TOTAL BY COUNTIES

| <u>County</u> | <u>State<br/>Funds</u> | <u>Federal<br/>Funds<br/>P.L. 875</u> | <u>Total</u>        |
|---------------|------------------------|---------------------------------------|---------------------|
| Adams         | \$ 295,538             | \$ 218,952                            | \$ 514,490          |
| Arapahoe      | 172,545                | 484,215                               | 656,760             |
| Baca          | 154,260                | 88,454                                | 242,714             |
| Bent          | 96,116                 | 76,284                                | 172,400             |
| Denver        | 918,789                | 1,376,051                             | 2,294,840           |
| Douglas       | 146,066                | 196,084                               | 342,150             |
| Elbert        | 384,282                | 387,318                               | 771,600             |
| El Paso       | 279,435                | 1,200,885                             | 1,480,320           |
| Fremont       | 600                    | 1,590                                 | 2,190               |
| Kiowa         | 16,205                 | 11,425                                | 27,630              |
| Kit Carson    | 23,753                 | 28,942                                | 52,695              |
| Larimer       | 40,612                 | 18,935                                | 59,547              |
| Las Animas    | 95,548                 | 83,481                                | 179,029             |
| Lincoln       | 52,059                 | 17,176                                | 69,235              |
| Logan         | 55,033                 | 113,496                               | 168,529             |
| Morgan        | 225,952                | 489,076                               | 715,028             |
| Otero         | 47,810                 | 63,890                                | 111,700             |
| Phillips      | 20,241                 | -0-                                   | 20,241              |
| Prowers       | 638,002                | 605,257                               | 1,243,259           |
| Pueblo        | 125,040                | 50,860                                | 175,900             |
| Sedgwick      | 20,417                 | 7,252                                 | 27,669              |
| Teller        | -0-                    | 49,683                                | 49,683              |
| Washington    | 3,325                  | 31,900                                | 35,225              |
| Weld          | 138,098                | 170,906                               | 309,004             |
| <b>TOTAL</b>  | <b>\$ 3,949,726</b>    | <b>\$ 5,772,112</b>                   | <b>\$ 9,721,838</b> |

\*Approved by Governor John A. Love August 11, 1965.

(1) How did the state -- its agencies and its citizens -- perform during the June floods?

(2) What can the General Assembly do to improve the state's performance during flood disasters through the adoption of changes in administrative procedures and through statutory or constitutional enactments?

(3) What can the state do to lessen the impact of future disasters?

The following sections contain summaries of the major areas reviewed by the committee during the course of its meetings in attempting to arrive at answers to the questions resulting from the flood disasters.

### Disaster Operations

All reports indicated that the disaster operations were conducted in commendable fashion by the state agencies concerned. The governor, the heads of state departments, and local officials commented favorably on the cooperation and assistance which they experienced during the time of emergency. Major problems were reported, however, with respect to communications and transportation. A need for more planning for disaster operations was also brought out during the committee's meetings.

The area of communications represented the number one problem in the conduct of disaster operations at all governmental levels. Included in this area were reports of inaccurate or non-existent reporting on water levels or flood crests; difficulties in communicating between state and local officials carrying out disaster operations, as well as difficulties in knowing what others were doing within the same organizational level; and the inability in some cases of being able to sort fact from fiction from the various reports being received.

To illustrate, an air lift operation was conducted to evacuate people supposedly stranded only to discover subsequently that an undamaged road led into this area, and considerable time was also spent in tracking down rumors which in most instances proved to be unfounded. Once the flood hit, the mayor of Lamar reported, the local radio stations were disabled and he had no way to contact the people in the community. At one time the National Guard received a request for 325 men from the mayor of Englewood and about ten minutes later a separate request was received from the sheriff of Arapahoe County for 300 men; it was later discovered that these were the same requests.

Closely related to the problem of communications was the problem of transportation. State highways, county roads, and city streets were dealt a severe blow by the floods, and immediate restoration of major surface traffic routes and connecting links was the primary concern of both state and local highway departments. The first problem encountered involved traffic control and evacuation of stranded persons. Another problem accompanying the floods was posed by sightseers, both before and after the floods arrived. In this connection, despite the fact that the powers of the State Patrol are essentially confined to highways, necessity dictated that state patrolmen order many curious

sightseers who stood along the river banks but off the highways to move to higher ground.

### Recovery Operations

Numerous state agencies were actively involved in the recovery operations following the flood disaster, as reported previously herein. These included the State Highway Department, the National Guard, the Division of Civil Defense, the State Patrol, the Public Health Department, the Public Welfare Department, the Agriculture Department, the Savings and Loan Commissioner, the State Bank Commissioner, and the State Insurance Commissioner. The availability of the services provided by these state agencies proved to be of great assistance to local officials and residents in the flood-ravaged areas. The mayor of Lamar pointed out, for example, that the city's contingency fund was budgeted only \$3,000 and this sum could not begin to meet the expenditures needed following the floods. He informed the committee that it was a great asset to have these programs and people available to help the people and officials in Lamar in an emergency, and he felt that this was an important function of government.

In addition to services provided by state agencies, various federal programs substantially aided those incurring losses from the floods. The two major programs in this respect are Public Law 875 for governmental entities and the Small Business Administration for businesses and homeowners.

The program under P.L. 875 provides an existing source of financial assistance for state and local governmental units following a major disaster. Under the provisions of the law, "'major disaster' means any flood, drought, fire, hurricane, earthquake, storm, or other catastrophe in any part of the United States which, in the determination of the President, is or threatens to be of sufficient severity and magnitude to warrant disaster assistance by the Federal Government to supplement the efforts and available resources of States and local governments in alleviating the damage, hardship, or suffering caused thereby, and respecting which the governor of any State (or the Board of Commissioners of the District of Columbia) in which such catastrophe may occur or threaten certifies the need for disaster assistance under this Act, and shall give assurance of expenditure of a reasonable amount of the funds of the government of such State, local governments therein, or other agencies, for the same or similar purposes with respect to such catastrophe." Thus, this program goes into operation as soon as the President concurs in a governor's proclamation that a specified area should be designated as a disaster area.

A federal-state disaster assistance agreement is executed following this concurrence, and all local governmental units within the designated disaster area are eligible for assistance under this program. In this respect, financial assistance is generally limited to protective work and other work necessary for the preservation of life and property, for the temporary replacement of essential public facilities of local governments, and for temporary housing or emergency shelter. "Essential public facilities" include such things as roads, bridges, culverts, channels, dikes, levees, water and sewer facilities, schools, hospitals, penal and welfare institutions, police facilities, etc., but

repairs to recreational facilities such as zoos and parks are not eligible for financial assistance under this program. "Eligible work" under P.L. 875 also can include work necessary to maintain or permit resumption of minimum essential services or to prevent or reduce hazards to health and safety, including the clearing of debris and wreckage on public and private lands.

Since many damaged facilities require immediate repair and restoration, the program under P.L. 875 also provides funds for reimbursable expenditures which are made before the normal operations of the program are instituted. These include:

(1) Expenditures for salaries and wages of extra employees and overtime pay of regular employees, except policemen and firemen, of governmental agencies directly engaged in performing eligible disaster work. Administrative salaries and regular salaries and wages of elected officials and regular employees are not eligible even though they may be directly engaged in disaster work.

(2) Expenditures for materials and supplies consumed in performing eligible disaster work except the cost of hand tools, personal equipment, and protective clothing.

(3) Expenditures for the rental of privately-owned equipment used in performing disaster work. The actual cost of fuel and repairs incurred in operating equipment on disaster work owned by a local agency more than the usual hours is also reimbursable.

(4) Expenditures for eligible work performed under contract by private contractors.

The Small Business Administration provides financial assistance to disaster victims in the form of direct loans or loans in participation with banks or other lending institutions to restore or rehabilitate property damaged or destroyed as a result of a natural disaster. Assistance is also available to small business concerns for economic injury due to drought or excessive rainfall when there is a declaration of a major disaster by the President under the provisions of P.L. 875. General disaster loans are available to individuals, business concerns (including corporations, partnerships, cooperatives, or other business enterprises), churches, and other charitable institutions suffering tangible property loss as a result of floods or other catastrophes. Loans will not be made to repair or replace damaged or destroyed summer or winter cottages, camps, lodges, or other residential property occupied by the owner exclusively for recreation or relaxation. However, if the property is primarily a rental property constituting an important source of income for the owner, a rehabilitation loan will be considered by the Small Business Administration.

In order to receive consideration, applications should be directed to any Small Business Administration Office located in or near the designated disaster area, any lending institution which is cooperating with the Small Business Administration in assisting disaster victims, or any temporary field office of the Small Business Administration when established in the disaster area. Farmers and stockmen should apply to the Farmers Home Administration.

So far as the June floods were concerned, one county official reported to the committee that "detailed information was not immediately available about the provisions contained in Public Law 875, to either local or federal officials. Consequently, efforts by volunteers were concentrated on the cleanup of public facilities with the result that private property, which is ineligible for Federal Disaster Relief, was dependent upon individuals, their relatives, friends and work corps personnel. Equipment and manpower could have been hired to clean up public facilities, leaving the volunteers free to work on rehabilitation of private property." Other persons meeting with the committee also reported problems resulting from the lack of information about the various relief programs available.

With respect to the Small Business Administration, some public misunderstanding about the time involved in obtaining funds was reported in the Lamar area. Initially, it was thought that it would be a matter of days or a week before SBA funds would be forthcoming; instead, funds for the first loans approved were not received until some eight weeks after the June floods. The Regional Director of the Small Business Administration for Colorado met with the committee to report on the emergency measures which had been adopted to speed up the processing of loans, including the hiring of additional staff, the establishment of temporary offices in the disaster area, and keeping offices open beyond normal working hours. The director pointed out, for example, that one Lamar-area application involved 12 title abstracts and the time required to process this application exceeded 16 days. Occasionally, emotionally-upset applicants added to the delay. One man, who was 65 years of age and who had just lost his \$150,000 business, took three or four weeks to decide if, in view of his age, he should accept a 20-year \$65,000 SBA loan.

In terms of recovery operations generally, the need for state and federal assistance was reported often to the committee by representatives of local governmental units. It was suggested, however, that there was a void at the state level which should be filled, namely, a single officer or agency should be designated as the coordinating and control center for recovery operations and programs. No one is assigned this responsibility at the present time.

### Flood Control Projects for the Future

As quickly as possible following the June floods, the state began consultations with the Corps of Engineers and the Bureau of Reclamation in regard to establishing a system of retention dams to protect against future floods. The governor reported to the committee that an over-all program for conservation and flood prevention is needed for the state, which means channel work, the building of check dams and other small structures, and the building of a few of the larger dams such as the proposed Chatfield Dam. He pointed out, however, that complete facts have to be developed first before an over-all program may be implemented.

Further, based on statements made to the committee, once agreement has been reached on the need for federal flood control and conservation projects, the support of the state and the community must be strongly demonstrated to Congress during all phases of congressional



consideration of the particular project in question.

### Emergency Fund and State Financial Assistance

Each year the General Assembly provides an appropriation to the governor for his emergency fund and for the agriculture and natural disaster fund. In recent years, \$50,000 has been appropriated for the governor's emergency fund, which may be spent at the governor's discretion, and \$150,000 has been appropriated for the agriculture and natural disaster fund.

On the basis of figures available as of October 15, 1965, or some four months following the flood disasters in June, the only sums spent from the agriculture and natural disaster fund were for those expenses of the National Guard which were borne by the state, or approximately \$29,000. Since a total of \$50,000 was encumbered from the fiscal year 1964-65 appropriation for expenditure in 1965-66, some \$21,000 remains available for additional payments for expenses connected with the June floods, if any. In addition, \$5,000 was transferred from the Governor's Emergency Fund to the Division of Commerce and Development for post-flood, out-state advertising and tourist promotion.

In the past, the use of the agriculture and natural disaster fund has generally been quite limited. During the course of the committee's meetings, however, one city official suggested that the term "disaster" be specifically defined, pointing out that many communities sustain financial problems each year as the result of heavy snowfall, rockslides, minor flooding, etc., and they do not have the funds or the revenue sources to adjust their budgets to meet these expenses.

So far as state financial assistance is concerned, the governor reported to the committee that he felt the primary interest at the state level must be the public peace, health, and safety. Some consideration was given to a program providing help to individual victims of the floods, but the governor found there were a number of problems connected with this idea. First, the state's constitution prohibits the use of public funds in such a manner. Second, there is the problem of equity in administration, even if it were permissible under the constitution, because it would be difficult to distinguish between disasters of one kind and another such as, for example, losses due to hail damage and losses due to high water.

A program to undertake the public solicitation of funds for distribution at the state level was also shelved because of the problems involved -- collecting the money and distributing the funds once they have been collected. In addition, the American Red Cross was present to conduct a similar program of assistance to individuals injured by the flood.

Only limited support for a state program to provide assistance to individuals in the future was noted during the course of the committee's meetings. At the Lamar meeting, a local banker, who was disappointed with the speed with which Small Business Administration loans were forthcoming, suggested that the state establish some type of loanable fund which could be used to provide aid quickly on the recommendation of the lenders who have had past credit dealings with the borrower.

In contrast to aid for individuals, several suggestions were made to the committee for additional state funds to assist in the purchase of emergency equipment, in the establishment of emergency programs at the local level, and in soil erosion work.

### Flood Plain Regulations

As reported to the committee, there are two major problems connected with preventing flood disasters -- keeping water away from man and keeping man away from water. So far as the former problem is concerned, flood control projects have been and are continuing to be proposed as the major solution, and these largely involve federal programs and agencies. Keeping man away from water is another matter entirely, however, and involves the exercise of power and responsibility by state and local governments.

While exact figures are unavailable, much of the dollar damage from the June floods resulted from the flooding of homes and business structures which were located in low-lying areas adjacent to the river beds. In this connection, the chief engineer of the State Highway Department reported to the committee: "We are all aware of the almost unbelievable amounts of rainfall which triggered this flood, but a careful review of our damage indicates that if the various stream courses had not carried the debris which they did the damage to the State Highways and local roads and streets, particularly structures, would have been greatly minimized." Further, he continued, "it is our observation that over long periods of normal and subnormal stream flow, the encroachments steadily progress toward the edge of the water course and then with abnormally high water they are swept into the channel and carried down stream where they are lodged to create a different flow of the channel and create enormous pressures against the substructure of various stream crossings. This condition prevailed on Plum Creek and both the Platte River and the Bijou's as well as the Arkansas River." The director of the Pueblo Regional Planning Commission graphically demonstrated to the committee that this situation also exists on Fountain Creek as it flows through the city to join the Arkansas River.

The June floods vividly demonstrated that, if the dangers of flooding are to be minimized, flood control projects in themselves do not provide the answer, and one of the most effective means of preventing flood damage, as suggested to the committee, lies in the exercise of various controls over the use of land in areas prone to flooding. Flood plain regulations are designed as preventive tools for reducing property damage, loss of life, and the ultimate cost of flood control, and include such measures as encroachment statutes, zoning ordinances, subdivision regulations, and building codes.

Encroachment statutes set forth or outline the designed flood way or flood channel at the state level, and encroachment lines are used to prevent or to control flood way encroachment. These are considered to be the first line of attack in any program of flood plain regulation.

Flood plain zoning would divide the total flood plain into a number of zone districts based upon the relative hazard. For example, gradations of this could be: "channel districts," for the prohibited

areas; "restrictive districts" for areas subject to rather severe damage in a major flood; and "hazard" or "warning districts" for areas of the flood plain that would be subject to damage only in an extremely severe flood. Following an inquiry with respect to the present law in Colorado relative to the powers of cities and counties to make plans and zone for the control of floods and other disasters, the Attorney General informed the committee that, "although the statutes provide for county planning and zoning authorities, they are not so specific in this regard as those pertaining to cities and towns. We would suggest, therefore, that more specific legislation be enacted giving cities, towns, and counties authority to provide controls for these purposes, since although the present statutes relative to cities and towns and those as to counties also might be sufficient, it is evident that the statutes...were not specifically designed to effect the purposes which it is desired be accomplished."

The regulation of subdivisions provides one of the most immediately effective means of reducing flood damage in generally undeveloped areas, according to a report from the planning directors in the Denver metropolitan area. Subdivision regulations, as a method in reducing flood damage potential, appear to be a particularly significant method along minor gulches and drainage courses, or those areas along which widespread damage from floods probably would not occur. Similar to action taken under a flood plain zoning ordinance, flood ways or hazard areas could be established by subdivision regulations.

A fourth tool that could be useful is to include necessary minimum requirements in building codes controlling the design of buildings to protect the structures against damage from floods. The basic element needed to make building codes more effective in this respect is a set of minimum requirements that could be adopted by individual communities.

Considerable sentiment was expressed at the committee's meetings for legislative action on flood plain regulations. One question was raised, however, as to whether flood plain zoning should be made mandatory for a given basin in order to be effective, or whether the local authorities should make this decision. In regard to an encroachment statute, one planning director stated that the principle is basically sound provided, he cautioned, careful engineering practices are required and a continuing review is required in light of changing conditions and developments.

### Local Action

On the basis of information developed by the committee, counties and cities could do much themselves to reduce the damages connected with any future floods. For example, it was reported to the committee that local authorities generally need to institute regular insect and rodent control programs and the better routine control of the disposal of solid wastes. Dumps located along rivers were washed out in the floods, and rats were dispersed throughout the towns. Much of this could have been averted through well-organized sanitary land-fill and rodent control programs. Similarly, when new water and sewage plants are built in the future, they should be located in areas not vulnerable to flooding, rather than on the river banks as were so many of the

worst-hit plants in the recent floods. Further, communities may want to concentrate on improving local disaster plans. In short, it could be that local governments should adopt the attitude that the worst will happen again and they should prepare for it now.

On the other hand, local officials reported, they are limited in their efforts to prepare for disasters for two main reasons -- lack of funds and lack of authority.

### Planning for the Future

The severity of the June floods resulted in the formation of several study groups, including the committee created by the Legislative Council at the direction of the Colorado General Assembly, not only to review the causes and effects of the floods but also to explore various proposals and plans for the future.

To mention a few of these, an Arkansas River Basin Flood Control Commission has been formed which plans to coordinate its efforts with the Corps of Engineers to arrive at solutions to the problems of channelization and tributary control. A Platte River Development Commission was appointed in Denver to prepare a long-term program for the redevelopment of the Platte River Valley. The Colorado Water Conservation Board has set up a flood control committee, and the Inter-County Regional Planning Commission has approved a comprehensive flood control study of the South Platte River in the Denver metropolitan area.

The Adjutant General's Office has prepared a comprehensive draft of a Colorado Disaster Plan, a copy of which is included in Appendix A. When adopted, this plan should provide the state and its agencies with an outline for action in the event of future disasters. In addition, this plan will provide a basis on which local political subdivisions within the state can develop their own natural disaster plans within an existing framework for the state as a whole.

At the present time, many individuals, associations, and governmental agencies are stressing preventive and corrective measures for the future. How long this stress will continue remains a question, however, and it might be well to remember that what happened in Colorado during the week beginning June 14th, 1965, could happen again in June of 1966, or even next week, were the same weather conditions to develop. Only the odds of chance and nature preclude such a disaster from reoccurring.

## APPENDIX A

### PRELIMINARY DRAFT OF COLORADO DISASTER PLAN

#### I. REFERENCES

A. Colorado Revised Statutes, 1963, Chapter 24 (The Colorado Civil Defense Act of 1950, as amended.)

B. Article IV, Section 13 and Section 15, Constitution of the State of Colorado (Provides for the Line of Succession to the Office of Governor of Colorado.)

C. Federal Civil Defense Act of 1950, as amended (Public Law 920, 81st Congress).

D. Emergency Interim Executive and Judicial Succession Act (when enacted).

E. Federal Civil Defense Guide published pursuant to the Federal Civil Defense Act of 1950.

F. Public Law 875, 81st U.S. Congress. An Act to authorize Federal assistance to States and local government in major disasters, and for other purposes.

G. Federal Disaster Relief Manual - Prepared by the U.S. Senate Committee on Government Operations, explaining the type of assistance each Federal Agency can provide and the procedures for obtaining such assistance.

H. Natural Disaster Manual for State and Local Applicants -- Published by the National Office of Emergency Planning -- August 1963.

I. Colorado Emergency Resource Management Plan.

J. Colorado Natural Disaster Relief Manual (to be published.)

K. DOD Directive 3025.10, Military Support of Civil Defense, The Civil Defense Role and Responsibilities of the Military Departments and Agencies.

L. Region 6, OCD, Emergency Operations Plan.

#### II. DEFINITIONS

A. "Political entity or subdivision" shall mean counties, cities and counties, and cities and towns and may include any other agencies designated by law as political subdivisions of the State.

B. "Disaster" is defined as any happening that causes great harm or damage as a result of enemy attack, sabotage, civil disturbance, or by flood, fire, earthquake, tornado, storm or other natural causes which is or threatens to be of sufficient severity and magnitude so as

to cause great hazard? to life and property requiring assistance by local governmental units.

C. "State Agency" means any office, department, bureau, board, agency, institution or other division, however designated, in the executive branch of the State Government.

### III. PURPOSE

A. The purpose of this plan is to provide a basis on which local political subdivisions within the State of Colorado can:

1. Develop readiness programs and operational plans for use in the event this State is subjected to nuclear attack.

2. Develop natural disaster plans in the event a natural disaster(s) occurs within their political jurisdiction and responsibility.

### IV. SITUATION AND ASSUMPTIONS

#### A. Situation

1. Enemy forces are capable of attacking any area of the Continental United States, including Colorado, by aircraft, missiles, nuclear or conventional weapons, biological or chemical agents and/or clandestine activities.

2. Colorado's topography, climate, seismicity, and heavy forests present a continual threat of such natural disasters as floods, tornados, earthquakes, and forest fires.

3. Certain areas of the State are considered vulnerable to civil disorders due to the following circumstances:

a. The increase in civil disturbances experienced in other parts of the country.

b. Colorado, becoming a year-round popular resort area, may have a temporary influx of individuals and groups with unruly tendencies.

c. Sociological statistics indicate that a certain percentage of individuals of any populace may be characterized by unrestrained conduct and disrespect for the law. Thus, based on these statistics, the general increase in population being experienced by Colorado would indicate an increase in the number of individuals in this category capable of fomenting civil disorders either spontaneously or through planned and organized group activities.

#### B. Assumptions

1. No disaster, man-made or natural, will strike every area of the State simultaneously. Effects will be localized; however more than one political jurisdiction may be involved.

2. Communications, particularly in the early phases of a disaster, will be curtailed or completely disrupted.

3. Affected localities will be isolated by weather, fall-out, debris, or other causes, until outside access can be restored.

4. The absence of active air defense facilities within the State would indicate that Colorado is not a primary target of the Communist Bloc, although not subject to direct attack in the initial phase of a nuclear war. The primary disastrous effects will be from fall-out; however all political subdivisions must be prepared for a nuclear strike resulting from faulty technology or effectiveness of our military forces in defense of other targets.

5. In peace time, State and Federal military forces will be available to assist civil authorities in any natural disaster.

6. In war time, neither State nor Federal military forces will be available to provide significant aid to civil authorities for disaster relief.

#### V. ACTIVATION AND AUTHORITY

A. The provisions of this plan will be activated by the Governor of Colorado, his legal successor, or his designated representative pursuant to:

1. Colorado Revised Statutes, 1963, Chapter 24 (The Colorado Civil Defense Act of 1950, as amended)

or

2. Colorado Revised Statutes, 1963, Chapter 3, Article 17 (Disaster Relief).

#### VI. POLICIES

A. It is the policy of the State government that the governing authority of the political subdivision in which a disaster occurs shall retain the responsibility for direction and control of its own governmental operations, personnel, resources, facilities and its own civil defense or other disaster units or organizations.

B. If the effects of a disaster require the normally established government of a self-governing political entity below the State level to seek outside assistance, the assistance provided shall supplement, not replace, that which is the inherent responsibility of the requesting governmental entity to protect the life and property of the populace within its jurisdiction.

C. In the event casualties, or other circumstances, resulting from disaster deprive the political entity of its capability to continue effective operations, the next higher political subdivision capable thereof will, when this becomes evident, assume authority to the extent necessary over the affected political subdivision until such time as governmental operations can be effectively resumed.

## VII. MISSION

### A. State

1. The mission of each agency and department of the State government, upon receipt of a request for disaster assistance from a next lower self-governing political entity, and approved by the Governor or his authorized representative, is to respond immediately to the extent required by the nature of the request and within the capability of the agency or department to provide.

2. When directed by the Governor or his authorized representative, each agency and department so directed will provide an appropriate representative to the State EOC, equipped with the authority, documents and instructions necessary to discharge the agency's responsibilities.

### B. Political Subdivisions

1. The mission of each self-governing political entity within the State of Colorado is to:

a. Maintain a current disaster plan, consistent with the current disaster plan of the next higher political entity to include facilities for and activation of a local Emergency Operations Center.

b. Respond immediately to requests for disaster assistance from a next lower self-governing political entity to the extent required by the nature of the request and within the capability of the requested entity to provide.

c. (SEE CHAPTER 24-1-9 MUTUAL ASSISTANCE AGREEMENTS)

d. Protect all life and property within its jurisdiction to the full extent of its capability.

e. When the capabilities of the political entity become inadequate to cope with the requirements generated by a disaster, seek necessary assistance from the next higher political entity.

f. Enact and maintain provisions to ensure continuity of governmental operations in the event of casualty losses among elected political officials within the political entity.

## VIII. DIRECTION AND CONTROL

### A. Colorado State Government

1. The Governor shall exercise general direction and control of all State agencies and departments involved in the execution of this plan. In the event of a disaster beyond the control of the responsible political subdivision, he may assume direct control over all or any part of the disaster operations as authorized by references A and B.



2. The Governor normally will exercise his authority through the State Civil Defense Director, who shall then be responsible to the Governor for the execution of this plan and for coordinating the activities of all agencies, departments, and organizations participating in disaster operations.

3. The executive head of each State agency and department involved in the execution of this plan, subject to direction and control by the Governor or the State Civil Defense Director, shall be responsible for the disaster operations of his agency or department.

## IX. CONCEPT OF OPERATIONS

A. Based on the situation, assumptions and missions and methods of direction and control defined above, the basic concept of operations is as follows:

1. The Governor of the State will be responsible for all disaster relief activities undertaken within the boundaries of the State of Colorado. He may delegate certain authorities for overall coordination and control of disaster relief operations to a specific State official, namely the State Civil Defense Director. The State Civil Defense Director will exercise his delegated authority for overall coordination and control of disaster relief operations through the facilities and personnel of the State Emergency Operating Center.

2. Similarly, the elected and/or appointed public officials of political entities below the State level have statute responsibilities to provide for the health, safety and welfare of the populace encompassed by the boundaries of their political subdivision. It is mandatory that these public officials recognize these inherent responsibilities and take appropriate action as required.

3. Upon receipt of information of a possible or impending disaster, the Governor, or his authorized representative, will declare specific operational action phase(s) in effect, to include establishment of Disaster Control Centers and take other actions as appropriate and delineated below.

### A. Operational Action Phases:

#### 1. Phase I -- The Readiness Phase:

a. This phase starts at the earliest time the threat or existence of a disaster is discovered. During this phase the Civil Defense Director will notify the Governor, place the civil defense staff on stand-by alert, declare Phase I operational, and, as the seriousness of the situation dictates, notify those State agencies and subordinate civil defense organizations which may be most concerned and which can provide relief actions. He will keep these agencies and organizations informed on developments through facilities of the State Emergency Operating Center (EOC).

2. Phase II -- The Emergency Action Phase:

a. This phase begins when the disaster occurs and lives and property are actually endangered. The Civil Defense Director declares Phase II operations, notifies all State agencies and civil defense organizations thereof, and executes this plan.

3. Phase III -- The Rehabilitation Phase:

a. Many activities associated with rehabilitation of disaster areas may actually commence during Phase II emergency operations; therefore, Phase III operations may run concurrently with Phase II. This phase will continue until recovery is completed. Typical activities during this period are to alleviate suffering, decontamination, emergency repair and restoration of buildings, utilities, streets, water and sewer systems, schools and other essential public facilities. Welfare and health activities continue and in many instances may increase in intensity.

B. State Emergency Operations Center (EOC)

1. The State Emergency Operations Center is a facility of the State, staffed and equipped for utilization as the center of operations for the State government.

2. The State Civil Defense Director is responsible for the operations of the State Emergency Operations Center.

3. The State EOC is equipped with communications facilities, office equipment, documents, maps, charts, etc., necessary for effective control and coordination of disaster relief operations.

C. Disaster Control Centers:

1. A Disaster Control Center (DCC) is a temporary extension of the State EOC established in the disaster area at the direction of the Civil Defense Director. It will be established to serve political subdivisions as designated by the Civil Defense Director. It will remain in existence through Operational Action Phase III until deactivated by the Civil Defense Director. It will be the channel through which State guidance, control and assistance is extended to the political subdivisions. It will be the channel through which political subdivisions will render reports to the State regarding the status of disaster operations and request assistance. It will coordinate the disaster operations of the political subdivisions it will serve as prescribed by the Civil Defense Director at the time it is established. It will be manned by personnel of the State Highway Patrol stationed in the area.

2. In the event of hostile attack using nuclear weapons, DCC's will be established in facilities providing protection from fallout radiation. They will operate under radiological defense control measures.

3. Under other disaster circumstances mobile capability will be used as required.

D. Communications:

1. In ordinary circumstances, communications will be carried on through the media of mail, telephone, telegraph, and teletype. The microwave system of the Colorado Highway Patrol may be utilized where appropriate.

2. In Phases I, II, and III, the normal communications channels will be augmented by inclusion of such radio systems as may be operated by other State agencies and by the Emergency Broadcasting Service as indicated in the Communications Annex to this Plan. In these circumstances, operation of radio systems will be the responsibility of and conducted by the agency under the direction of the State Director of Civil Defense.

3. In the handling of communications to, from, and within disaster areas, all available means of communication will be placed at the disposal of the State EOC and the Disaster Control Center. Disaster traffic shall have priority over all other communications.

4. In Phases I, II, and III, the RACES system may be utilized as a part of the disaster communications system. The communications systems of sheriffs, police, and fire departments shall be made available to the Disaster Control Center as required and appropriate and shall assist in handling all disaster traffic or related matters incident thereto.

5. Routing of traffic shall be through the Disaster Control Center for local traffic, and through the State EOC for all other traffic insofar as possible in order to achieve necessary coordination and control.

6. At the request of the State Civil Defense Director, units of the State Forestry Service, the Highway Department, the Highway Patrol, the National Guard, and the Colorado Wing of the Civil Air Patrol will be dispatched to the scene of disaster to augment communications capabilities and to perform tasks assigned by the State Civil Defense Director.

7. Each agency of the State of Colorado, and the governing authority of each political subdivision shall become familiar with, and in the event of disaster, shall conform to the Communications Annex of this plan.

8. The State Civil Defense Communications and Warning Officer shall direct all communications activities under this plan.

## COMMUNICATIONS OP-PLAN

### I. SITUATION

Primary means of communication available to the State of Colorado are telephone, telegraph, and mail. Limited radio communication is available to specialized agencies. Inadequate radion communication capability exists for command and administration by this agency from the State EOC. During an emergency, the Emergency Broadcast Service is available for dissemination of presidential messages and/or use by the Governor of the State of Colorado and local governments.

### II. ASSUMPTIONS

1. Almost any type of disaster can disrupt normal communications. Additionally, material failure can occur at any time.
2. The greatest number of communications alternatives will be imperative under disaster conditions to achieve coordination and control in relieving distress and promoting recovery and rehabilitation.
3. Emergency communication's needs will have to be met with existing facilities as it will be impracticable or impossible to create new facilities under disaster conditions.

### III. MISSION

To provide means whereby all echelons of Civil Defense Government and supporting Agencies within the state may communicate with each other under normal and/or emergency conditions, including attack and post-attack situations, and natural disasters. To provide communications with Federal Government Agencies.

### IV. SUPPORTING FORCES

1. The Department of Defense, Office of Civil Defense (support and assistance, consistent with its own mission). NAWAS, NACOM 1, NACOM 2 SEE COSIGO 17, 18, and 19
2. Federal Communications Commission (technical aid and data pertaining to radio communications).
3. Federal Agencies, U.S. Forest Svc, Bu Rec, Corps of Engrs, U.S. Geological Survey, U.S. Weather Bureau, FAA, etc.
4. Military units in the State (communications assistance, consistent with their own missions).
5. The communications systems of the Colorado State Patrol and the Colorado Highway Department are an integral part of the Civil Defense Communications Service. SEE COSIGO 4
6. Communications facilities of other State or City agencies, State Forest Service, Game and Fish Department, and City

police, Fire and Water Departments, may be used by the Communications Service. (SEE COSIGO 6)

7. Colorado National Guard (communications aid, consistent with its own mission). (SEE COSIGO 7)
8. Facilities and personnel of private telephone, telegraph and teletype companies. (SEE COSIGO 16)
9. Commercial and amateur (RACES) radio facilities and personnel, and the Citizens Radio Service. (SEE COSIGO 1-10-11-12-15 and 8)
10. Mobile radio nets of railroad, trucking, taxicab, oil and other commercial firms. (Auxiliary communication facilities).
11. Colorado Wing of the Civil Air Patrol communications assistance consistent with its own mission. (SEE COSIGO 2 and 3)
12. Broadcast Radio & TV Stations of the Emergency Broadcasting Service (EBS). (SEE COSIGO 19)

## V. SUPPLY AND TRANSPORTATION

### A. Supply

1. Insofar as practicable adequate spare parts for repair of radio equipment will be stocked at the EOC. Telephone and teletype spare parts will be stocked by Mountain States Telephone and Telegraph Company. Spare parts for Federally installed equipment will be stocked by OCD Region IV at the EOC.
2. Current needs of the communications service will be transmitted to the State Purchasing Division by the communications officer for procurement following established procedures. Emergency procurement will be by open market purchase as prescribed by State Purchasing Division.

### B. Transportation

Under normal operating conditions transportation of personnel and equipment will be provided by Civil Defense vehicles. Under emergency conditions air or ground transportation will be provided by Colorado Highway Patrol vehicles, private vehicles, military air or ground vehicles as available and the Colorado Wing of the Civil Air Patrol.

## VI. COMMUNICATIONS AND CONTROL

- A. The State Civil Defense Communications Officer at the State EOC is charged with the responsibility for all emergency communications. He will coordinate with the chiefs of other communications services as required.
- B. All communications nets shall be "directed" nets with net control passed to stations designated by the state communications officer.

- C. Special radio frequency assignments for emergency use shall be as assigned by FCC and as reassigned by State Communications Officer.
- D. Succession to command for the communications service shall be:
  - 1. State Civil Defense Communications Officer
  - 2. State Radio Officer
  - 3. State RACES Officer

## VII. ORGANIZATION

- A. The Communication Service will be organized in such manner as to provide for the expeditious handling of routine and emergency communications by any and all means. For this purpose there will be established three operating conditions as follows:
  - 1. a CONDITION ALPHA (Routine)  
This is the normal day-to-day operating conditions wherein the State C.D. Officer is manned between 0800 and 1630 LZT. Communications will be carried on thru the media of mail, commercial telephone, NAWAS, NACOM 1, and the micro wave system of the Colorado Highway Patrol.
  - b No additional communications personnel are assigned. The regular personnel of the State EOC will perform communications functions of the office.
  - 2. a Condition BRAVO (Limited Emergency and Warning)  
Condition BRAVO will be ordered at the discretion of the State Director of Civil Defense. This condition applies to situations of increased readiness as required by either a local or State disaster condition (fire, flood, snowstorm, etc.) or a condition arising from threat of attack or civil disturbance.
  - b Under Condition BRAVO the State EOC will be manned twenty-four (24) hours per day. Disaster Control Centers will be manned on a twenty-four (24) hours per day basis as directed by the State Director of Civil Defense. Fixed and/or portable communications units of the State Forestry Service, the Highway Department, the Highway Patrol, the Colorado Wing of the Civil Air Patrol will be utilized. Additionally, communications facilities of the RACES system and of political subdivisions will be used as outlined in D.4 of the Colorado Disaster Plan.
  - c Condition BRAVO, Phase I, Colorado Disaster Plan V, A, 1, will be terminated by direction of the State Director of Civil Defense, or when Condition CHARLIE is declared in effect.

- d Communications operator personnel will be assigned to man all operational circuits in use on a twenty-four (24) hour per day basis. A staff communications watch officer will be assigned as required.
- 3. a Condition CHARLIE (Phase II, Colorado Disaster Plan V, A, 2) will become effective as ordered by the Governor of the State of Colorado. It may be a sequel to Condition BRAVO or may be ordered without previous motive as conditions require. This condition applies to all state wide or national emergency conditions.
- b In condition CHARLIE the State EOC will be manned on a twenty-four (24) hour a day basis. All communications facilities both wire and radio will be capable of manned operation as shown in table I attached.
- c Condition CHARLIE will be terminated at the direction of the Governor of the State of Colorado. This condition may apply to Phase III operations (Colorado Disaster Plan V, A, 3) as required.

B. Staffing Pattern EOC

- 1. Condition ALPHA
  - a Staff Communications Officer
  - b One (1) operator, Normally a secretary
- 2. Condition BRAVO
  - a Communications Watch Officer
  - b One (1) Operator wire lines (Telephone, Telegraph, NAWAS, NACOM 1)
  - c Two or more Operators per radio circuit in use.
- 3. Condition CHARLIE
  - a Communications Officer (1)
  - b Chief, Message Center (3)
  - c Operators, (Radio) 3 each per circuit, 5 circuits (15)
  - d Secretarial personnel will be assigned to commercial telephone lines and to NACOM 1.
  - e Personnel of the State Highway Patrol will man the radio units in the State EOC for communications thru the State Highway and State Highway Patrol systems.
  - f One radio technician will be assigned to the communications center.

- g Each operational section of the State EOC will provide one or more messengers as required to carry message traffic to the section concerned.

C. Staffing Pattern Disaster Operating Area

1. Condition ALPHA will not apply.
2. Condition BRAVO
  - a Two or more operators per radio circuit
  - b One operator wire lines as required
3. Condition CHARLIE
  - a Organization will parallel that of the State EOC in so far as possible.
  - b In Condition CHARLIE, members of the RACES system shall be used to operate that system.
4. Mobile units will be staffed by the agency to which assigned but each mobile unit, either ground or air must have sufficient personnel assigned to carry out the communications assignment and to permit safe operation (ground or air) of the vehicle.

D. Radio Service

1. RACES 1 - (SEE COSIGO 1)
2. CAP AIR-AIR & AIR-GROUND - (SEE COSIGO 2)
3. CAP POINT TO POINT - (SEE COSIGO 3)
4. COLORADO STATE PATROL - (SEE COSIGO 4)
5. STATE ADMIN. CKT - (SEE COSIGO 5)
6. COLORADO FISH & GAME DEPT - (SEE COSIGO 6)
7. COLORADO NATIONAL GUARD - (SEE COSIGO 7)
8. CITIZENS RADIO SERVICE - (SEE COSIGO 8)
9. EMERGENCY BROADCAST SERVICE RPU LINK - (SEE COSIGO 9)
10. RACES 2 - (SEE COSIGO 10)
11. RACES 3 - (SEE COSIGO 11)
12. RACES 4 - (SEE COSIGO 12)
13. MARS - (SEE COSIGO 13)



14. NACOM 2 - (SEE COSIGO 14)
15. RACES 5 & 6 - (SEE COSIGO 15)

E. Commercial Services

1. Tel & Tel - (SEE COSIGO 16)
2. NAWAS - (SEE COSIGO 17)
3. NACOM 1 - (SEE COSIGO 18)
4. EBS - (SEE COSIGO 19)

F. Procedure and Message Center Operations SEE COSIGO 20

X. RESPONSIBILITIES

A. Civil Defense Agency (See Annex A):

The Director of Civil Defense, or his designated representative, is responsible for

1. Evaluating impending disaster information and declaring phases of emergency operations (Phase I, II or III),
2. Notifying appropriate State agencies and departments assigned responsibilities herein, and appropriate political subdivisions of the disaster possibilities and the phase of operation.
3. Readyng the EOC for disaster operations, preparing to assume control of the operations, and establishing liaison with appropriate Federal agencies,
4. Notifying the heads of appropriate State agencies and departments assigned responsibilities herein regarding what personnel will be required from the agencies and departments in the EOC during the conduct of disaster operations,
5. Activating and assuming control of the EOC,
6. Calling personnel of State agencies and departments to the EOC at the appropriate time for conduct of disaster operations,
7. Maintaining current disaster situation maps and status boards,
8. Making appropriate reports to the Governor concerning status of disaster and disaster operations,
9. Making appropriate releases to news media concerning status of disaster and disaster operations,
10. Recommending specific actions to the Governor when the severity of the disaster requires recourse to Public Law 875.

B. Colorado State Patrol (See Annex B):

The Chief, Colorado State Patrol, is responsible for

1. Operating State warning points and passing air alert attack warnings to all county governments,

2. Establishing Disaster Control Centers when and where directed by the Civil Defense Director or his authorized representative,

3. Assisting local governments in controlling traffic on state highways in disaster areas,

4. Providing communications between the EOC and local governments in disaster areas,

5. Providing security control of EOC when determined necessary by the Civil Defense Director or his authorized representative,

6. Providing available aerial reconnaissance as required.

C. Colorado Military Support Headquarters (See Annex C):

The Commander, Colorado Military Support Headquarters, is responsible for

1. Providing available military personnel and equipment for use in support of State and local governments in accordance with decisions of the Governor,

2. Providing available aerial reconnaissance as required.

D. State Department of Highways (See Annex D):

The Chief Engineer, State Department of Highways, is responsible for

1. Collecting, evaluating, and disseminating damage assessment information. Maintaining current damage assessment status in the EOC during disasters,

2. Providing available assistance to the governments of political subdivisions confronted with disaster for the protection of life and property,

3. Providing available assistance to Disaster Control Centers when established,

4. Providing available communications assistance to Disaster Control Centers and governments of political subdivisions confronted with disaster,

5. Providing available aerial reconnaissance as required.

E. State Department of Public Health (See Annex E):

The Director, State Department of Public Health, is responsible for

1. Collecting, evaluating, and disseminating information relating to the status of the public health. Maintaining current public health information in the EOC during disasters,
2. Providing available assistance in public health matters, including health mobilization and radiological defense, to local governments confronted with disaster,
3. Coordinating with the American Red Cross in providing available and necessary drugs, biologics, medicines, and blood supplies,
4. Providing available water chlorination equipments and operating personnel as required,
5. Operating infirmary in EOC.

F. State Department of Public Welfare (See Annex F):

The Director, State Department of Public Welfare, is responsible for

1. Collecting, evaluating, and disseminating information relating to the status of public welfare. Maintaining current public welfare information in the EOC during disasters,
2. Providing available assistance in public welfare matters to local governments confronted with disaster,
3. Providing available assistance in public welfare matters to the American Red Cross in disasters.

G. State Department of Agriculture (See Annex G):

The Commissioner, State Department of Agriculture, is responsible for

1. Collecting, evaluating and disseminating information relating to the status of agricultural matters. Maintaining current agriculture information in the EOC during disaster,
2. Providing available assistance in agricultural matters to local governments confronted with disaster,
3. Providing available assistance in agricultural matters to the American Red Cross in disaster,
4. Providing available communications assistance to State and local governments during disasters.

H. Civil Air Patrol (See Annex H):

The Commander, Colorado Wing, Civil Air Patrol, is responsible for

1. Providing available aerial messenger and carrier service to State and local governments during disasters,
2. Providing available aerial transportation of personnel or equipment for State and local governments during disasters,
3. Providing available aerial photographic and reconnaissance to include radiological defense monitoring service to State and local governments during disasters,
4. Providing available communications service to State and local governments during disasters,
5. Providing personnel during disasters in the State EOC to maintain operational control of the CAP services, and to operate communications equipments located there for CAP use.

I. Department of Game, Fish and Parks (See Annex I):

The Director, Department of Game, Fish and Parks, is responsible for

1. Providing available warning, evacuation and rescue assistance to local governments confronted with disaster,
2. Providing available communications assistance to DCC's as established and to local governments confronted with disaster,
3. Providing available aerial reconnaissance to State and local governments during disaster.

J. State Civil Service Commission (See Annex J):

The President, State Civil Service Commission, is responsible for

1. Providing such personnel, facilities, and assistance in time of disaster as the Governor, or his designated representative may direct.

K. State Department of Employment (See Annex K):

The Executive Director, State Department of Employment, is responsible for

1. Collecting, evaluating, and disseminating manpower status information. Maintaining current manpower status information in the EOC during disasters,
2. Furnishing available manpower assistance to local governments confronted with disasters.

L. Public Utilities Commission (See Annex L):

The Chairman, Public Utilities Commission, shall be responsible for

1. Collecting, evaluating and disseminating information regarding the status of transportation services. Maintaining current status information in the EOC during disaster,
2. Providing available transportation assistance to State and local governments during disasters.

M. American Red Cross (See Annex M):

The Red Cross Advisor to Region Six OCD is responsible for

1. Designating the Red Cross representatives who will go to the State EOC on call of the Director of Civil Defense, or his designated representative, and who will then be responsible for coordinating the assistance of the various State agencies assigned assistance responsibilities above.

N. Emergency Resource Management Agency (See Annex N):

The Director, State Emergency Resource Management Agency is responsible for the management of available resources within the State during a post-disaster situation wherein there is a temporary breakdown in Federal direction and control. This responsibility includes:

1. Management of the supply and resupply of available resources to include both immediate and continuing survival and recovery needs.
2. Management of economic activities within the State that are essential to continued survival and recovery.
3. At the judgment of the Governor, keeping the public advised of economic stabilization and resource mobilization policies and procedures.

O. State Natural Disaster Agency (See Annex O)

The Director, State Natural Disaster Agency, is responsible for coordination, under the general direction and guidance of the Civil Defense Director, all natural disaster recovery activities during Phase I, Phase II, and Phase III.

P. State Department of Institutions (See Annex P)

The Director, State Department of Institutions, is responsible for:

1. Providing personnel and equipment to assist in the protection of life and property, when requested to do so by proper authority,

2. Providing such other assistance within the department's capability as may be requested by proper authority.

Q. State Industrial Commission (See Annex Q)

The Chairman, State Industrial Commission, is responsible for providing such personnel and assistance as the Governor or his designated representative may direct. This assistance will be for such services as:

1. Assisting in damage surveys relating to matters of public safety and recommending to proper authorities remedial actions necessary,

2. Damage assessments of public and private buildings and related equipment and furnishings and relaying results of these assessments to proper authorities.

R. State Department of Education (See Annex R)

The Commissioner, State Department of Education, is responsible for:

1. Coordinating the provision of proper shelter facilities for faculty and students at each school should a disaster suddenly occur during normal school hours, thus preventing evacuation to domiciles,

2. Providing the State EOC with an estimate of the situation pertaining to schools and their occupants at the disaster scene,

3. Coordinating and making arrangements through local school boards for the use of buildings, facilities, equipment and supplies under the local board's jurisdiction within the disaster area for relief purposes.

S. State Oil Inspection Department (See Annex S)

The Director, State Oil Inspection Department, is responsible for conducting immediate post-attack/disaster damage surveys relating to inspection of all LPG, natural gas, and all inflammable fluids storage, dispensing, processing and transmission facilities for matters relating to safety and contamination. When so required, he will take whatever remedial action deemed necessary to alleviate any dangerous or potentially dangerous situations found to exist.

XI. ANNEXES

- A - Civil Defense Agency
- B - Colorado State Patrol
- C - Military Support Headquarters
- D - State Department of Highways
- E - State Department of Public Health
- F - State Department of Public Welfare
- G - State Department of Agriculture
- H - Civil Air Patrol

- I - Division of Game, Fish and Parks
- J - State Civil Service Commission
- K - State Department of Employment
- L - Public Utilities Commission
- M - American Red Cross
- N - Emergency Resource Management Agency
- O - Natural Disaster Agency
- P - State Department of Institutions
- Q - State Industrial Commission
- R - State Department of Education
- S - State Oil Inspection Department

XII. DISTRIBUTION

- All State Agencies and Departments (37)
- All Counties (63)
- All Municipalities (249)

## DEPARTMENT OF HIGHWAYS

DEPARTMENT OF HIGHWAYS  
STATE OF COLORADO  
4201 E. ARKANSAS AVE.  
DENVER, COLORADO 80222



CHAS. E. SHUMATE  
CHIEF ENGINEER

## STATE OF COLORADO

Nov. 4, 1965

Mr. Kenneth Montfort, Member  
Colorado House of Representatives  
341 State Capitol Building  
Denver, Colorado

Dear Representative Montfort:

In accordance with your request to this Department we are transmitting herewith a tabulation of the Emergency Relief Projects which were budgeted on the Federal Aid State Highway System of our State by the Highway Commission.

The typed figures are the figures budgeted and the written figures in the extreme right-hand column are our recent estimates of cost to complete each individual project based upon either actual contract prices or our latest detailed estimates.

On those projects where the word "same" is used, it is our belief, on the basis of our present detailed estimates, that the amount originally budgeted will cover the cost.

You will note on the last page where the two totals are that the present estimates indicate the possibility of their being \$578,800.00 excess money after the completion of the restoration work. Of this amount \$250,000 will be State Funds. Any unused Federal Funds, of course, under this Emergency Relief Program are released and are not available for other type work.

By approximately January 1, 1966 the Department should be in a position to give your Committee and the Legislature a very complete and accurate breakdown of the costs as compared to the original estimates as they apply to the State Highway System and this, of course, we shall do.

If there is any further information which we can furnish you please do not hesitate to call.

Very truly yours,

CHAS. E. SHUMATE  
Chief Engineer

CES :mw  
Encl:



EMERGENCY RELIEF PROJECTS

| PROJECT NO. | S.H.        | LOCATION   | COUNTY                  | TYPE                                | STATE   | FEDERAL | TOTAL     | ESTIMATED COST |
|-------------|-------------|--|-------------------------|-------------------------------------|---------|---------|-----------|----------------|
|             |             |  |                         |                                     |         |         |           | OCT. 1965      |
| ER 14(1)    | 1           | In Castle Rock Area                              | Douglas                 | P.E., Gr., Strs. & Pav.             | 515,200 | 604,800 | 1,120,000 | \$ 1,050,000 * |
| ER 15(1)    | 1           | 1.5 Mi. N. of Larkspur                           | Douglas                 | P.E., Gr., Strs. & Pav.             | 177,100 | 207,900 | 385,000   | 300,000 *      |
| ER 16(1)    | 1           | Approx. 6 mi. S. of Colo.Springs                 | El Paso                 | Riprap Fill Slide, etc.             | 65,320  | 76,680  | 142,000   | same           |
| ER 17(1)    | 1           | Wooten-Starkville                                | Las Animas              | Grading, Pav. etc.                  | 13,800  | 16,200  | 30,000    | same           |
| ER 18(1)    | 185         | Alameda & Platte River                           | Denver                  | Bridge                              | 69,000  | 81,000  | 150,000   | same *         |
| ER 19(1)    | 2           | Wiggins-East                                     | Morgan                  | Gr., Strs. & Pav.                   | 107,640 | 126,360 | 234,000   | 185,000 *      |
| ER 20(1)    | 1           | In Pueblo  | Pueblo                  | Gr., Curb,Gutter & Pav.             | 4,600   | 5,400   | 10,000    | 11,000         |
| ER 21(1)    | 185         | Valley Highway-23rd to Santa Fe                  | Denver                  | Storm Sewer, Lands & General Repair | 138,000 | 162,000 | 300,000   | same           |
| ER 22(1)    | 70          | Hampden & Platte River                           | Arapahoe                | Bridge, etc.                        | 231,380 | 271,620 | 503,000   | 350,000 *      |
| ER 23(1)    | 26, 31 & 75 | Bowles, Belleview, Alameda Aves. & Co. Line Road | Denver-Douglas-Arapahoe | Debris Removal & General Repair     | 34,500  | 40,500  | 75,000    | same           |
| ER 24(1)    | 8           | 1 Mi. W. of Deertrail                            | Arapahoe                | P.E., Bridge & Apprs.               | 151,800 | 178,200 | 330,000   | same           |
| ER 25(1)    | 8           | 1 Mi. East of Peoria                             | Arapahoe                | Bridge & Apprs.                     | 140,300 | 164,700 | 305,000   | same           |
| ER 26(1)    | 8           | 1 Mi. West of Byers                              | Arapahoe                | P.E., ROW, Bridge & Apprs.          | 163,300 | 191,700 | 355,000   | 200,000        |
| ER 27(1)    | 102         | 7 Mi. N.E. of Byers                              | Adams & Arapahoe        | P.E., Bridge & Apprs.               | 184,000 | 216,000 | 400,000   | same           |
| ER 28(1)    | 4           | 2 Mi. E. of Colo.Spgs.-N.E.                      | El Paso                 | P.E.,Gr.,Stab. & Pav.               | 121,900 | 143,100 | 265,000   | 225,000 *      |
| ER 29(1)    | 18          | Jct. 96-S.E. to Ark. River                       | Pueblo                  | P.E.,Gr.,Stab. & Pav.               | 16,284  | 19,116  | 35,400    | 50,000         |
| ER 30(1)    | 59          | S. of Lamar & Springfield                        | Prowers-Baca            | P.E., Bridges & Apprs.              | 133,400 | 156,600 | 290,000   | 255,000 *      |
| ER 31(1)    | 2           | 2.5 Mi. S.E. of Merino                           | Logan                   | P.E., Bridge & Apprs.               | 255,300 | 299,700 | 555,000   | same           |

EMERGENCY RELIEF PROJECTS (Continued)

| PROJECT NO. | S.H.                        | LOCATION  | COUNTY                         | TYPE                          | STATE   | FEDERAL | ESTIMATED COST |            |
|-------------|-----------------------------|---|--------------------------------|-------------------------------|---------|---------|----------------|------------|
|             |                             |   |                                |                               |         |         | TOTAL          | OCT. 1965  |
| ER 32(1)    | 14                          | 1.5 Mi. E. of Sterling  | Logan                          | P.E., Bridge & Apprs.         | 13,800  | 16,200  | 30,000         | 70,300 *   |
| ER 33(1)    | 3, 2<br>& 102               | US 85 (Owl Crk.), US 138<br>(Potter Dit.) & US 36<br>(Beaver & Plum Crk.) | Weld<br>Sedgwick<br>Washington | Emergency Repairs             | 11,500  | 13,500  | 25,000         | Same       |
| ER 34(1)    | 6                           | Lamar-Kansas Line   | Prowers                        | P.E., Gr., Strs. & Pav.       | 195,500 | 229,500 | 425,000        | 500,000 *  |
| ER 35(1)    | 75                          | At Riverside  | Douglas                        | P.E., ROW, Bridge & Apprs.    | 103,500 | 121,500 | 225,000        | same *     |
| ER 36(1)    | 27                          | 3 Mi. N. of Fountain  | El Paso                        | P.E., Bridge & Apprs.         | 23,000  | 27,000  | 50,000         | 55,000 *   |
| ER 37(1)    | 86                          | 1 Mi. W. of Kuhns Crossing  | Elbert                         | P.E., ROW, Bridge & Apprs.    | 82,800  | 97,200  | 180,000        | same       |
| ER 38(1)    | 101                         | S.E. of Las Animas  | Bent                           | P.E., ROW, Bridge & Apprs.    | 121,900 | 143,100 | 265,000        | same       |
| ER 39(1)    | 51, 89<br>& 196             | Near Holly & Granada  | Prowers                        | P.E., Gr., Stab. & Pav.       | 59,800  | 70,200  | 130,000        | 210,000    |
| ER 40(1)    | 10, 71,<br>96, 109<br>& 266 | Vicinity of Rocky Ford  | Otero<br>Kiowa<br>Bent         | P.E., Gr., Drain & Pav.       | 11,500  | 13,500  | 25,000         | same       |
| ER 41(1)    | 39                          | S. of Goodrich  | Morgan                         | P.E., Bridge & Apprs.         | 25,300  | 29,700  | 55,000         | 60,000 *   |
| ER 42(1)    | 209, 227<br>& 233           | East of Pueblo  | Pueblo                         | P.E., Gr., Strs. & Pav.       | 92,000  | 108,000 | 200,000        | 55,000 * C |
| ER 43(1)    | 71                          | North of Stoneham   | Weld                           | P.E., Gr., Riprap, CBC & Pav. | 18,400  | 21,600  | 40,000         | 50,000 *   |
| ER 44(1)    | 83&88                       | East of Littleton   | Arapahoe                       | Emergency Repairs             | 20,700  | 24,300  | 45,000         | -0-        |
| ER 45(1)    | 86                          | 9½ Mi. E. of Kiowa  | Elbert                         | P.E., Bridge & Apprs.         | 124,200 | 145,800 | 270,000        | same       |
| ER 46(1)    | 86                          | 5 Mi. S.E. of Kiowa   | Elbert                         | P.E., ROW, Bridge & Apprs.    | 106,260 | 124,740 | 231,000        | same       |
| ER 47(1)    | 52                          | 2 Mi. East of Hudson  | Weld                           | P.E., Bridge & Apprs.         | 13,800  | 16,200  | 30,000         | 44,300 *   |
| ER 48(1)    | 105 & 67                    | South of Sedalia  | Douglas                        | P.E., ROW, Bridges & Apprs.   | 92,000  | 108,000 | 200,000        | same       |

EMERGENCY RELIEF PROJECTS (Continued)

| PROJECT NO. | S.H.          | LOCATION                       | COUNTY  | TYPE                         | STATE     | FEDERAL   | TOTAL     | ESTIMATED COST |
|-------------|---------------|--------------------------------|---------|------------------------------|-----------|-----------|-----------|----------------|
|             |               |                                |         |                              |           |           |           | OCT. 1965      |
| ER 49(1)    | 25            | South of Crook                 | Logan   | Emergency Repair             | 13,800    | 16,200    | 30,000    | 25,000         |
| ER 50(1)    | 71            | South of Snyder                | Morgan  | Emergency Repair             | 13,800    | 16,200    | 30,000    | 28,000         |
| ER 51(1)    | 52            | North of Ft. Morgan            | Morgan  | P.E., Gr., Strs. & Pav.      | 92,000    | 108,000   | 200,000   | same           |
| ER 52(1)    | 52            | South of Atwood                | Logan   | P.E., Gr., Strs. & Pav.      | 29,900    | 35,100    | 65,000    | 70,000 *       |
| ER 53(1)    | 94            | East of Colorado Springs       | El Paso | P.E., Gr., Dr., Strs. & Pav. | 94,300    | 110,700   | 205,000   | 175,000        |
| ER 54(1)    | 144           | 3 Mi. West of Fort Morgan      | Morgan  | P.E., Gr., Strs. & Pav.      | 179,400   | 210,600   | 390,000   | same           |
| ER 55(1)    | 14, 263<br>66 | Briggsdale-Greeley-Platteville | Weld    | Emergency Repair             | 9,200     | 10,800    | 20,000    | same           |
| ER 56(1)    | 116           | 5 Mi. West of Two Buttes       | Baca    | P.E., Gr., Strs. & Pav.      | 6,900     | 8,100     | 15,000    | same           |
| ER 57(1)    | 101           | Toonerville-Northerly          | Bent    | Gr. & Gravel Surf.           | 6,900     | 8,100     | 15,000    | same           |
| ER 58(1)    | 1             | In Castle Rock (Sellers Cr.)   | Douglas | Bridge & Apprs.              | 125,000   |           | 125,000   | 90,000 *       |
|             |               |                                |         |                              | 4,209,984 | 4,795,416 | 9,005,400 | 8,426,600      |

\* Based on bid prices rec'd. to date

① Approved program includes new bridge at Boona. District indicates this is out.