Organized Cooperation to Meet Emergencies

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I heartily agree with the statement—first attributed, I believe, to your Hoosier poet, James Whitcomb Riley—that the best after-dinner speech is the speech that was not made. However, since Dean Potter has so graciously invited me to speak this evening, I shall try to reward his courtesy and your patience by discussing as briefly as possible a matter that is of concern to all public officials and of particular concern to state and county highway engineers. I refer to the almost complete lack at present of a national blueprint of action for emergency relief in times of disaster.

When Mother Nature is in a benign mood, as she has been today on this beautiful, green-garbed campus, it is easy to forget how destructive she can be when she unleashes all the fury of her natural forces in storms, floods, blizzards, hurricanes, tornadoes, and earthquakes.

As we look back over the record of disasters caused by the forces of nature through the years, we are astounded at how little we have done to prevent disasters where it is possible to do so, as in the case of flood protection. We are only now beginning to consider the steps that should be taken to establish a coordinated plan of action at all levels of government—federal, state and local—to provide prompt emergency relief when unpreventable disasters occur.

SOME RECENT DISASTERS

Fresh in our minds, of course, are the blizzards, described as the worst in history, that swept across the Rocky Mountain and Western Plains states during the past winter. Huge drifts up to 30 feet in depth were piled up on the railroads, highways, and county roads, and in the streets of cities and towns. Several cities and towns and thousands of ranches and farm homes were isolated for weeks. Cattle and sheep died in droves, and in some instances human life was imperiled. Several deaths, directly attributed to the snowstorm, were reported.
Texas City Explosion, 1947. More than 500 persons perished in the Texas City, Texas, disaster of April, 1947. Explosion of a ship loaded with nitrate in the harbor touched off a series of other blasts and set fire to oil refineries and industrial plants along the waterfront. (Federal Works Agency photo.)
Total losses from property damage and destruction of livestock have not been computed. This figure, of course, should include the cost of repairs to damaged drainage structures and to road surfaces that broke up during the spring thaw. It is probable that many miles of bituminous surface will have to be reconditioned, resealed, and possibly resurfaced.

Winter blizzards in the western states were not as disastrous, however, as the summer floods in the Columbia and Kootenai River valleys, which destroyed crops and washed away rich topsoil from thousands of farms in Washington, Oregon, and Idaho, and inundated Vanport City and sections of Vancouver and Portland when dikes on the lower Columbia broke in June of last year, rendering more than 5,000 families homeless and causing tremendous loss of property and some loss of lives. Great damage was done to roads and bridges.

The Columbia River flood was the worst disaster in 1948, but by no means the only disaster. There were serious floods and numerous tornadoes in southern and midwestern states. Indiana did not escape. A tornado struck the southwestern and central parts of the state on the afternoon of March 26 of last year, causing widespread damage in the counties of Vigo, Clay, Putnam, Marion, and Hendricks. The towns of Coatesville and Danville and rural sections of Hendricks County were most severely damaged. In Coatesville, 14 persons were killed, and most of the homes and public buildings in both towns were leveled. State and local roads throughout the county were impassable because of the debris piled on them.

The disaster record for the preceding year, 1947, was blacker still. In April of that year, a ship loaded with nitrate blew up in the harbor at Texas City, Texas, touching off a series of other explosions and setting fire to oil refineries and industrial plants along the waterfront. More than 500 persons lost their lives in that disaster. Damage to public and private property was estimated at 47 million dollars.

The Texas City disaster, though shocking, was less widespread and less destructive than the forest fires that broke out in many places in Maine in October, 1947, after a prolonged drought, causing the greatest disaster in the history of the state. Fed by dry grass and the trees and brush that cover most of Maine, the flames spread through five counties along the coastline. Forest fires also occurred in Oxford County on the New Hampshire border and in three counties in the interior of the state. About 35 towns were severely damaged. A number of persons lost their lives in this catastrophe. Transmission and communication lines were broken. Debris blocked the roads in many cases, restricting both communication and the movement of people and firefighting equipment. In several instances "back fires" set to protect a community from the ad-
MAINE FOREST FIRES, 1947. Mobilizing fire fighters along the five-county area on the Maine coastline. The Federal Works Agency rushed heavy equipment and supplies into the area, including demountable metal houses obtained from war surplus property. Thirty-five towns were severely damaged, and blocked roads restricted both communications and the movement of people and fire-fighting equipment. (U. S. Forest Service photo.)

Advancing flames spread to other towns that could not be warned because of broken communication lines.

Flash floods in Rutland County, Vermont, in June, 1947, caused four reservoir dams to break, spilling a wall of water 15 feet high down the narrow valley, washing out bridges and highways, disrupting utility, water, and sewer systems, and leaving about 400 families homeless in the towns of Rutland, Pittsford, Chittenden, Brandon, and Leicester. In the city of Rutland three major bridges were destroyed.

Hurricanes on the east coast of Florida and along the Gulf Coast sections of Mississippi and Louisiana in September, 1947; heavy floods in the Mississippi-Missouri River basins, which inundated farm lands in five or six states, causing serious damage to crops and to drainage and irrigation systems, with an estimated loss of more than 240 million dollars in damage to public and private property; flash floods that caused heavy damage to highways and property in the vicinity of Saranac, New York, in July; and a tornado that roared through sections of Louisiana and Arkansas in December, leveling everything in its path,
were other disasters that took a large toll in lives and property damage in 1947.

I have recited this distressing two-year record of death and destruction to remind you that catastrophes which make newspaper headlines are not rare occurrences. They occur frequently, sometimes at intervals of a few weeks in one section of the country or another, and we never know in advance where the next one will strike.

We all know of the wonderful work done by the Red Cross organization—how it is prepared to move instantly to aid the victims of disaster. It provides rescue service, food, clothing, medical attention, and temporary mass shelter. It meets the most immediate and critical needs of injured, homeless, and starving people. But it has not been assigned the job of construction and replacement that is necessary to deliver relief supplies and start a stricken area on its way back to the normal way of life.

IMPORTANCE OF TRANSPORTATION AND COMMUNICATION

The point I wish to emphasize is this: the job of keeping open the lines of transportation and communication is obviously of tremendous importance in any disaster area, and that job is primarily the responsibility of highway engineers and maintenance crews when the disaster disrupts transportation facilities.

When blizzards were raging in western states last winter, the highway often was the only means of transportation and communication. Some of the railroads could not dig out the drifts on their tracks until a week after the roads were open. The Union Pacific double-track main line through Wyoming, for instance, was snowbound from February 4 to February 18, the most serious tie-ups being east and west of Rawlins. Other railroads were blocked for even longer periods in the vicinity of Cheyenne, Casper, and points in Nebraska. Some of the drifts on railroad tracks had to be blasted with dynamite before they could be removed by the plows. Highway maintenance crews, operating snow plows, were frequently sent on "mercy missions" to isolated districts, to carry medical aid and food to humans and livestock, and to rescue travelers caught in the storm.

During the Florida hurricane in September, 1947, communication between groups of rescue workers and emergency relief headquarters was maintained by members of the State Highway Patrol, whose cars were equipped with two-way radios. When the hurricane hit New Orleans two days later, taxicabs equipped with radio telephones were used to
PACIFIC NORTHWEST FLOOD DISASTER, 1948. These escaped. Water up to the hub caps of these automobiles seeking the safety of Denver Avenue in Vanport rose a few minutes later to short the ignition. Many cars were completely submerged. (Portland Oregonian photo.)

summon emergency aid quickly to various parts of the city. But the task of restoring normal transportation and communication after the storm subsided, replacing washed-out bridges with temporary structures and opening up roads and streets to travel, devolved upon the highway forces.

Major disasters of recent years have made us realize, more clearly than ever before, the extent to which we have become dependent upon the use of highways for the necessities of life and for our various business pursuits. Changes in methods and modes of living since the advent of the automobile have created a paradoxical situation. When I was a boy in Burlington, Iowa, half a century ago, the community often was snowbound for weeks at a time, and farm homes in outlying sections were cut off from communication with the town for long periods in the winter months; but actually there was less hardship and suffering than occurs today, in a highly motorized age, when hurricanes and floods rip out roads and bridges and heavy snowstorms block the highways and halt all forms of transportation.
Pioneers who moved westward to Indiana, Iowa, and elsewhere during the past century, and the first generation of their descendants, made provision for isolation. Knowing that roads would be impassable in the winter, they laid up large supplies of foodstuff and other necessities which they themselves could not produce, buying flour, sugar, rice, and salt by the barrel or 100-pound bag in preparation for the winter months.

With the coming of the automobile and the improvement of rural roads, farmers got into the habit of going to town every few days to purchase supplies. Today the average farmer goes regularly to the nearest town to buy commodities that may last a week at the most.

The paradox is that today, with highly developed transportation facilities and greatly improved highways, residents of a community hit by a major disaster are more completely isolated and suffer greater deprivation than did our forebears, who were not dependent upon quick transportation to supply their needs. Changes in our mode of living
Pacific Northwest Flood Disaster, 1948—Bonners Ferry, Idaho, on the Kootenai River, on May 27. Flood waters backed into the town after the dikes failed in adjacent drainage areas. The levees within the town, heavily reinforced, held. The Federal Works Agency rushed materials and equipment into the town. (Federal Works Agency photo.)

during the past two generations now require the daily use of motor vehicles.

Geared as our country is to automotive transportation, it is essential that we provide for such transportation on an adequate scale when either peacetime or wartime disasters occur.

Restoring disrupted transportation facilities is, however, only one of the many emergency needs that must be met quickly when catastrophes such as floods, hurricanes, tornadoes, earthquakes, explosions, forest fires and unusually heavy snow-and-ice storms cause widespread devastation and loss of lives. Any plan of action in future disasters should be broad enough to encompass every requirement for the prompt relief of human suffering and deprivation, and the restoration of normal living conditions in the disaster area.

Disaster Relief Organizations

In the light of past experience, it has become increasingly evident that an organization should be established in every state, under the direc-
PACIFIC NORTHWEST FLOOD, 1948—ELLENSBURG, WASHINGTON. Trucks haul rock for a jetty in the Yakima River west of Ellensburg, where the flooding stream broke through a strong dike and raced down a channel it had not used for many years. This jetty is intended to force the river back into its old channel. The Federal Works Agency sped heavy equipment in the area. (Seattle Post-Intelligencer photo.)
tion of the state government, to prepare a definite plan of action and to put this plan into effect when disasters occur. Each state will want to plan its own form of organization, but there is ample experience to indicate the authority and responsibility each should have.

Pacific Northwest Flood, 1948—Winthrop Washington. With the main span of this Methow River bridge washed away by flood crest, transportation and even commerce (note case of eggs) depended on a cable crossing. Cable car trainways were used at several places in the flood area until temporary bridges could be installed by the Army engineers. The flood practically cut off the Methow Valley and its 8,500 people for several days. (Seattle Post-Intelligencer photo.)
Because of the importance of keeping highway transportation facilities in operation in times of disaster, the state highway department would, of course, hold a key position in any disaster relief organization. Services of other state agencies and county and municipal authorities, as well as relief and welfare agencies outside the government, would be enlisted to put the emergency relief plan into effect.

California, Oklahoma, Massachusetts, Maine, and a few other states already have drafted or are developing disaster relief plans along the lines I have suggested. In Indiana, as you perhaps know, initial steps to establish a disaster relief organization were taken in April of last year by former Governor Gates, who assigned to the Indiana Economic Council the task of coordinating and setting up details of a disaster relief plan, under the general direction of Mr. Paul F. Middleton, Chairman of the Council. After the inauguration of Governor Schricker, the Economic Council was instructed to continue its development of the disaster relief plan. In a majority of states, however, no attempt has been made to prepare for future disasters.

The federal government also has been remiss in neglecting to establish a long-range policy with respect to immediate assistance to state and local governments for the emergency repair, rehabilitation, and reconstruction of public facilities damaged or destroyed as a result of storms, floods, or other disasters. While some federal departments and agencies have the authority to expend funds for the repair and rehabilitation of federal property, many do not have the authority or appropriations to carry on such work promptly.

Federal-aid funds have been and are available in limited amount for repairs and reconstruction of flood-damaged roads and bridges on federal-aid highway systems, but not elsewhere. Prompt action to cooperate with state engineers in planning reconstruction has followed every major flood for several years. Public Roads engineers have been on the ground as the flood waters subsided and have reversed usual processes to let action come first and the paper work later. However, an important service has been lacking. The legislation has not authorized advance preparation for disaster, including the designation of men and equipment to be used. There has been none of the readiness of a fire department awaiting the call to action.

There is a need for highly coordinated effort on the part of all federal agencies having trained men, equipment, or supplies useful in the work to be done following disasters. It is important that the responsibilities for this coordinated action be clearly outlined in federal legislation. Federal agencies, in attempting to assist states and local communities in times of disaster, have encountered limitations of authority and in-
adequacy of funds which point up, to me, the necessity of assigning authority to some agency of the federal government to act as disaster dictates.

It has been recommended that any federal assistance for disaster relief should be provided only on request from the governor. Such federal assistance need not affect any of the existing authorities or normal activities of the various federal agencies. Appropriate federal legislation would provide a legal mechanism whereby the federal government could cooperate with the state governments more effectively in extending aid to local communities severely damaged by a disaster that overtaxed the state's resources.

Snowbound Disaster, 1949—Nevada, on U. S. 93, 38 Miles North of Pioche. A nine-foot road has been cleared. (Federal Works Agency photo.)

Limited federal assistance to states and communities stricken by disasters has been furnished during the past two years through the Disaster Surplus Property Program, which is administered by the Bureau of Community Facilities of the Federal Works Agency, under provisions of Public Law 233, better known as the Aiken Act.

Under the terms of this law, the Federal Works Administrator or his designated representative is authorized to transfer or lend to state and local governmental agencies any suitable war surplus personal property that may be available for use in alleviating damage, hardship, and
suffering caused by floods or other catastrophes, in instances where the President has determined that an invocation of the law is necessary.

For purposes of the program, “personal property” means property of all kinds except land and structures erected on land. The term not only includes equipment, furnishings, materials, and medical supplies, but also includes packaged building units, demolished buildings, and lumber or other materials obtained from the demolition of buildings.

The Aiken Act was passed by Congress and approved by the President on July 25, 1947, shortly after the disastrous floods in Rutland County, Vermont, and in the valleys of the Mississippi and Missouri Rivers. The Act, however, was not limited to these particular disasters.

![Snowbound Disaster, 1949—Arizona. Federally-owned tractor pulling hay on a homemade sled on the Vic Watson ranch. (Federal Works Agency photo.)](image)

It was so framed as to provide federal assistance in the alleviation of suffering or hardship caused by “flood or other catastrophe.” By directive of the President, it was made retroactive to cover emergency aid provided by federal agencies in the Rutland County floods and the Texas City disaster, by the processing of the proper documents. The federal agencies gave what assistance they could when it was urgently needed in the Texas City catastrophe, and let the paper work follow.

In the Texas City disaster, all city fire-fighting equipment was destroyed and a number of school buildings were so badly damaged that they could not be restored to use without extensive repairs. Under the Veterans’ Educational Facilities Program, the Bureau of Community Facilities had acquired Camp Wallace, approximately 12 miles from
Texas City. Fire-fighting equipment available in this camp was rushed immediately to Texas City; motor vehicles were made available to transport refugees from the area; barracks were put in order and supplied with beds, bedding, and other necessary furnishings to accommodate the refugees, and eating facilities were provided to feed them. The Red Cross was responsible for admission of refugees and for operating the eating facilities. The Army provided patrols for police duty and set up hospital and nursing facilities.

All these steps were taken during and immediately following the disaster. Upon passage of the Aiken Act, a recommendation was made by my office that the president declare the area to be a disaster area. This was done on August 1. Considerable time had elapsed between the occurrence of the disaster in April and passage of the law, but it was agreed that property transferred from surplus stores of the War Assets Administration immediately after the disaster should be accounted for under provisions of the Act. Similar action was taken in regard to surplus equipment and supplies furnished to communities in Rutland County, Vermont, after the floods. In the meantime, communities in Rutland County, in cooperation with the state, the Red Cross, and other agencies, had made emergency repairs sufficient to restore various public services, had cleared up some of the debris, and had made some of the roads passable.

Snowbound Disaster, 1949—Arizona. Convoy with medical supplies on the way to Navajo Mountain. (Federal Works Agency photo.)
In the Columbia River flood disaster last summer, among the items transferred from surplus-property stores were several hundred trailers which were shipped on flatcars from Texas to provide temporary shelter for the homeless families of Vanport City. After the forest fires in Maine, quonset huts and large quantities of household furnishings, beds and bedding, medical supplies, and other necessities were provided for families whose homes had been destroyed.

During the past two years, under the Disaster Surplus Property program, approximately 1,668,000 items having a fair market value of nearly five million dollars have been sold or loaned to state and local governments in areas declared by the President to be "disaster areas."

There can be no question that the program has proved helpful in the various disaster areas proclaimed thus far by the President. It must be stressed, however, that the program soon will be unable to furnish even the limited assistance which it has been able to give up to this time. The source of supply is rapidly drying up. The Army and Navy are still declaring some property surplus, but much of this property is unsuitable for Disaster Program operations.

I have discussed federal disaster services at some length because it is the field where I have had experience, and the federal government will always be called upon whenever urgent need cannot be met with state resources. However, I would not place first responsibility for disaster relief with the federal government. It belongs with the state, and that is where I would place it.

Our states in the northern half of the country have created excellent organizations for clearing snow from highways. Men and equipment with assigned jobs stand ready for instant action throughout the winter. Everything needed, including funds, is authorized before the snow begins to fall. Only on occasions such as the past winter do they fail to have the highways open to travel soon after the storm passes.

The same sort of organization is needed in broader form to cope with all kinds of disaster. It should include all agencies that can perform a useful service. Among the services that come immediately to mind are rescue, medical aid, food supply, shelter, fire-fighting, transport of all kinds, and emergency construction.

Each of these services requires men, equipment, and supplies. It is characteristic of our people that there has always been a generous response to calls for aid, but not a well planned, organized, and prepared response. Adequate preparation is not something that can be done for a minor sum. In your own highway field there is need for stockpiling such items as portable emergency bridges, piling, lumber, lighting equipment, fuel, and lubricating oil.
Blizzard Disaster, 1949—Nevada. Cattle are moved to hay through cuts made in the snow. Withstanding subzero temperatures is difficult even on a full stomach, but these Nevada cattle did it for weeks without food until they could be "plowed out" to haystacks. (Federal Works Agency photo.)

Because of the large amounts of equipment, trained men, and materials required there would be great advantage if neighboring states would develop arrangements for reciprocal aid.

State legislative action is needed to create authority, provide funds, and outline scope of action. Professional groups such as highway engineers can perform a valuable civic service by studying their part in meeting past disasters and pointing out what needs to be done to be in readiness for the ones that are certain to come.

A BLUEPRINT FOR ACTION

The Maintenance and Equipment Committee of the American Association of State Highway Officials, after studying the effects of the blizzards on highway transportation, concluded that there should have been a predetermined blueprint of action to meet emergency highway conditions. In a report to Commissioner MacDonald of the Public Roads Administration, the committee suggested that such a blueprint of action should have defined and provided for the following:
1. Appropriate state legislation and legal authority for the state highway department to act as emergency coordinator upon the declaration of a highway transportation emergency by the governor.

2. Appropriate state legislative and legal authority for the state highway department to cooperate with the county, municipal, and other local highway departments upon their request, after the emergency had been declared by the government; and legislative action to legalize the rental of state-owned equipment to other states during emergency conditions.

3. Appropriate federal legislation whereby the Public Roads Administration could be called in by state highway departments to assist in the emergency transportation problem when it has exceeded the capacity of the state highway department.

The committee also advocated the stockpiling of roadbuilding equipment, materials, and portable bridges for use in emergencies.

Only by coordinating the efforts of federal, state, and local governmental agencies and marshalling all available resources on a state or regional basis can we hope to mitigate the hardships and suffering that follow in the wake of major disasters.