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PLANNING FLOOD DAMAGE PREVENTION

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A STATE RESPONSIBILITY

PLANNING FLOOD DAMAGE PREVENTION--
A STATE RESPONSIBILITY

by

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Perhaps the best way to introduce this subject is to offer my personal philosophy that the State does have a major responsibility in planning flood damage prevention. This is a philosophy that grew out of circumstances, to be sure, but in more than a decade of operation I have found no cause for substantial deviation from this position.

Fifteen years or more ago, I found in working with communities which experienced occasional flood damage that there was official and public concern regarding such damages and an accompanying desire to avoid them. Being acquainted with the internal operations, files, and personnel of TVA, I realized that within that federal agency was a reservoir of information and of engineering talent which, if unlocked and brought to bear on specific local situations, could contribute much of the necessary basis for flood damage prevention planning.

Now, the essential data and the flood records required interpretation. The personnel capable of making these interpretations were not only burdened with their regular workload, but in addition there was a definite communication barrier between these men and the local political leadership. The local people hardly knew what to ask for and what to do with data, if available, and the technical people and engineers were hardly used to talking in simple terms understandable to the local political leaders.

It would make sense, therefore, if a responsible state agency could assume a role of knowledgeable intermediary and make understandable requests on the one hand and assist in local presentations and interpretations and applications on the other. This kind of expression of

interest, together with the prospect of a responsible arm of state government with which to deal, no doubt had its persuasive effect in TVA's deliberations which resulted in its establishing a tangible local flood relations staff.

As is apparent to anyone who has been involved at all in flood damage prevention planning, there is another inescapable relationship of the state to such work. That is the relationship we might identify as state statutes. The State, of course, is the source of authority for local governments--in most instances the authority for their very existence, but more specifically it is from the State that comes the authority to establish local planning commissions, to engage in zoning, to regulate the subdivision of land, to establish channel lines, and other acts and powers without which local attention to floods and potential flood damage becomes pretty much a matter of conversation and polite persuasion.

TRENDS

Let's review the role of the states and the responsibilities presently discharged by the states in some other fields.

Prior to 1920 road building was primarily an uncoordinated effort on the part of a lot of local governments across the country. The primary objective was getting out of the mud and when this was accomplished in some degree and travel was possible over longer distances the next major hurdle was connecting up the hard surface roads so that one could drive longer distances. The state was the logical vehicle for providing a network of roads that at least connected the county seats together and state highway departments came into the picture. As the Federal Government moved into highway work through the Bureau of Public Roads, the Bureau did not take over the highway program on a national basis but rather contracted with the various states and thus we have the federal participation in the highway system with the state carrying the major responsibility for actually planning and constructing the roads.

In the welfare field we have come a long way in the last thirty years from the county poor house and private charity as the only hope for the

indigent and unfortunate to the present status of state welfare departments administering various programs with federal backing. Again, the states have assumed a responsibility and are able to conduct programs geared to their own needs and standards.

In the fields of physical and mental health there is again a parallel. Only the major metropolitan counties have been able to finance and maintain worthwhile hospitalization and treatment facilities for mental, tubercular, chronically ill, and geriatrics patients. In less populous areas the local resources could not reasonably do more than offer confinement or restraint to such unfortunates. During recent years and with strong leadership on the part of the states great strides have been made which are perhaps most spectacular in the field of mental health.

The activities of the several states and the practical necessity of state involvement in financial backstopping and the establishment of reasonable standards in education are well known. Statewide taxation in support of education is rather uniformly prevalent throughout the South and represents still another field of state assumption of responsibility.

The development of water resources is an area of growing concern to the states and one in which additional states are taking positive action. The development of state water policy and state action has come somewhat more slowly in the relatively well-watered southeast than in the semiarid western states.

In the field of flood damage prevention there is not only the need for concerted state action and assumption of state responsibility but from the foregoing sample programs mentioned, there is ample precedent and there are numerous examples of the public interest having been served as a result of state action.

A STATE PROGRAM

A successful program of flood damage prevention must be comprehensive in its approach. The desired results will not be achieved by single-shot approaches as witness the residual and increasing vulnerability to flood

damage after years of work and billions of dollars expended in constructing flood control facilities. Flood plain zoning is often the program coming most readily to mind and, therefore, most frequently mentioned, but this again is only one of the tools which should be applied.

Zoning and other flood damage prevention action should not be expected of local governments working alone, but rather can best succeed as a collaborative effort at all levels of government, each playing the part and assuming the responsibilities best fitted to it. Within this context let's consider some specific elements which appear as appropriate or logical parts of the overall state responsibility.

1. Provide the necessary leadership toward organizing flood damage prevention programs in local communities. Such leadership can be brought to bear in the local scene in a number of ways. In those states where local planning assistance is carried on by force account operations, this is a most obvious channel. In the course of developing and executing the local planning program floods should be taken into account just as surely as other natural phenomena such as the topography, geology, or prevailing winds. Planning for floods, zoning for floods, street planning for floods is not the desirable approach but rather the flood damage vulnerability should be kept constantly in mind and made part of the context for truly comprehensive planning.

Perhaps the sparking of local interest and action will not always stem from the official planning program. Perhaps there have been public health hazards due to pollution of water supply by floods which can be used as the motivation for constructive local action. Or perhaps the Public Works Department has an upset budget due to unexpected costs of repairs to flooded streets, pumping out of basements, removal of debris, etc., and it may be that by showing the public works officials a constructive course of action the community consciousness can be aroused through those channels. In short, there is no one anointed and exclusive point at which state leadership can be applied in the local community--the opportunities are many, but the chances of local action are much greater

if there is state leadership available rather than simply trusting to luck that some local official will just happen to get an idea about flood damage prevention.

2. Providing through appropriate enabling legislation the necessary tools by which both state and local governments may act in a comprehensive manner. Most obvious in the enabling legislation is the appropriate inclusion of the power to take into account floods in comprehensive planning and in the establishment of zoning districts and regulations. The zoning powers, incidentally, should be part of the overall grant of authority for zoning so that zoning in flood plains be part of a comprehensive zoning ordinance rather than that flood plain zoning be a separate thing which would make about as much sense as having a separate ordinance for commercial areas, a separate ordinance for residential areas, and a separate ordinance for industrial areas.

Such enabling legislation should include the authorization and powers to acquire lands or interests in lands in order to prevent hazardous and unwise occupancy of such areas and in many instances to preserve them as open space areas, preserve their scenic beauty and otherwise protect or enhance the welfare of citizens and the community.

I am not prepared at this time to say definitely whether or not specific legislative authorization should be given to municipalities to refuse to accept or extend streets or to install utilities in flood prone areas and thus deter unwise occupancy of such areas. This is a desirable end, but perhaps such action can be taken to a satisfactory degree under the general governmental powers of the municipalities.

3. Coordinating, implementing and assisting through its various departments the federal programs in this field. Certainly, the experience of TSPC and TVA under which the Federal Agency could deal with a responsible branch of State Government acting in behalf of the communities has shown substantial results. We were in a position of knowing the status of planning in each community, the quality of local leadership, and other

local items having a predictable bearing on the acceptance and probable action based on flood data if available. TVA had the data and could guide us in appraising the relative vulnerability of the various communities and could guide us in stimulating the local leadership and creating a climate conducive to action. We were able to suggest priorities for local flood studies and were able to implement such studies through our local contacts and programs of service in the several communities. The State agency serving in this capacity has turned in sufficiently good performance in other Tennessee Valley states as to reasonably prove the validity of state participation in this regard. This demonstration supplied, in part at least, the basis for Congressional action under Public Law 86-645 authorizing the Corps of Engineers to make flood studies and to report them to responsible state and local requesting agencies. In preparing for the administration of that act the Chief of the Corps of Engineers directed that appropriate offices of his organization contact every governor to secure from the governor his specific designation of a state agency responsible for cooperation with the Corps under the new program.

There are many federal programs having some bearing on water and having direct or indirect bearing on floods, flood prevention, and in turn flood damage prevention. These are located in various federal agencies which in turn are represented by decentralized offices in the several states and it is apparently inevitably in the nature of things that the various federal programs are not fully coordinated and in some instances the federal representatives are not even acquainted with each other. To the extent that this situation exists it is a prima facie argument for stepped up action and assumption of responsibility by the states in developing a state policy, state resources program, and constructive coordination by the state among the various state and federal programs affecting its lands and in turn its people.

4. Providing for continuing research and development of better methods of flood damage prevention. Every community has its distinctive topography, its distinctive land use patterns, and if it has a flood hazard, its distinctive flood hazard situation. In Tennessee, we have a variety of

local situations ranging from towns in narrow valleys by steep gradient streams in East Tennessee to towns by sluggish water courses in the flat lands of West Tennessee. Floods in the former areas are rushing torrents of mighty destructive power whereas the latter areas are damaged mostly from silt-laden backwaters which creep up over a period of hours or days. While no one specific measure of flood damage prevention equally fits all our communities, our communities could be grouped into major categories based on dominant characteristics of floods. Measures to cope with torrential floods, for example, need not be invented anew for each community--the state is an instrumentality adapted to the carrying of the best of the inventions from one community and disseminating such information in other communities of similar exposure.

5. Develop local leadership in flood damage prevention and help overcome deficiencies in local government organization and administration so as to achieve reasonable levels of protection. The State cannot and should not either accept or usurp all responsibilities for flood damage prevention in its several communities. This would be a considerable burden in terms of public expenditures and staff investment as well as having the net effect of undermining local government and its responsibilities. The alternative is to encourage and develop through the making available of advice, technical and legal information, and by similar means the know-how and the will to serve in this capacity. If an effective job depends on the upgrading and creation of better responsibility and better administration in local government this might well be encouraged so that its benefits might be realized in flood damage prevention as well as other roles of local government.

6. Developing statewide standards for flood damage prevention action. Statewide standards are quite obvious if the state program includes the delimitation of floodways under some uniform definition. General standards as a basis of programs and procedures can be particularly valuable in quieting legal questions. I have in mind, for example, an instance in which a municipality would successfully defend its actions in a suit after which it or other communities could proceed with confidence using the same standards or procedures in anticipation of similar handling of their

case in the event of further court action. Again, statewide standards could be a valuable guide in arriving at engineering decisions such as clearance or cross section of the space under bridges or major culverts for the passage of floods. Standards for flood proofing could be valuable throughout a state and previous decisions as to conditions under which flood warnings would be given would be the most helpful as a guide to action.

SUMMATION

I assume that we are all in agreement that to prevent flood damage to life and property we must either keep water away from man and his works or keep man and his works away from water. I assume further that we are in agreement that not all local problems can ever be solved by flood prevention by means of flood control. In any community the public welfare can be served by some combination of control and damage prevention and in those communities where control is out of the question the only hope is through damage prevention.

I assume further that we would all agree that the public relationship to flood damage prevention embraces all levels of government--federal, state, and local. The state is the instrumentality best able to view the situation from a perspective transcending the purely local. The federal agencies involved have broader territorial responsibilities embracing a wide variety of landscapes, flood hazard areas and even climatic zones, and when a federal agency has a federal law under which to operate and administrative regulations and procedures uniform throughout the agency, then to that extent it is difficult or impossible to adapt to smaller regional or local situations and their peculiarities.

The State has an intimate relationship to its creatures, the local governments. It has many points of contact and channels for assistance, encouragement or control in relation to those local governments.

Finally, if the states do not assume appropriate responsibilities in relation to flood damage prevention, the people and their local representatives are not going to accept the lack of action as the final answer

and as their destiny. Such vacuums do not long exist. If the people, through their local representatives, dissolve that vacuum by direct appeal to and cooperation with the Federal Government, we will never rectify that situation by even impassioned speeches on states rights.

COMMENTS

by

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This excellent paper outlines very well the role that states should play in the all-important game of reducing the flood damage potential throughout the nation. The author's views are supported with realistic statements and facts concerning the need for such a role as well as the respective benefits to be derived from varying degrees of leadership by the states.

These comments will supplement the paper by emphasizing four points.

The Tennessee Valley Authority has been cooperating with the seven Valley states for about eight years in an effort to utilize to the maximum degree the concept of prevention. That program calls for prevention to be used to supplement correction in the reduction of flood damages. Why not prevent the growth of flood damage potential the same as we prevent fires or prevent disease? Our experience has indicated that such a program moves slowly, if at all, unless the state agencies play an effective role.

The record in the Tennessee River Basin now shows that TVA--the Federal Government--has prepared flood information studies for about 80 of the nearly 150 communities which have local flood problems. These studies are included in some 70 reports. The studies were made by TVA at the request of local communities and the respective state planning agencies. State coordination of requests has permitted the limited assistance--about 10 studies each year--to be utilized in the most effective manner to meet the more urgent needs.

The reports cover the flood hazard areas of the cities and the adjacent areas likely to be urbanized. They do not suggest plans for solutions to the flood problems. Rather, they are intended to provide a basis for further study and planning by the cities in solving their problems.

Presented in usable form are data on: extent, depth, and period of inundation; rate of rise; velocities; frequency of flooding; regional floods; maximum probable floods; and topographic maps and cross sections.

After the cities receive the flood reports they review their comprehensive plans for expansion, in light of the flood data. The assistance of planners on the staff of the state planning agencies and further technical assistance of TVA is utilized. Those studies do include recommendations for solutions.

All of the communities have made good use of the flood data, although some have reaped greater benefits than others. About half of them have made or are considering making supplemental studies to determine the best solution to their local flood problems. TVA continues to give them technical assistance in those studies. More than 20 communities have formally adopted flood plain regulations and another half dozen are at the point of taking such action. Interest and action of local communities is quite closely related to the policy, guidance, and assistance of the respective state agencies.

The Corps of Engineers was recently authorized to give similar assistance to all of the states in the nation. Mr. Miller's paper mentions this. Additional details pertaining to that program will be found in Mr. Leach's comments that are also made a part of this paper.

It is important to recognize that the Federal Government does not have the police power that is required to utilize zoning, subdivision regulations and other similar controls. That power lies within the states and the states have in turn shared it with cities and counties. Therefore, it is necessary that states as well as local governmental agencies assume greater responsibility in this field.

Many local flood problems extend beyond the jurisdiction of any one city or any one county. For that reason there is a need for a regional or a state agency to assist in planning and putting into effect plans for preventing flood damages. It is believed everyone will agree that the

most reasonable manner of handling a major stream that passes through many cities and several counties would be by the state or in accordance with a plan developed by the state with the assistance of local officials.

The fourth point to be emphasized is the indispensable value of officials and citizens understanding the need for and reasonableness of flood plain regulations. Without such an understanding by the local officials and people, the use of the police power cannot be effective. Why? Because the people will not cooperate in administering the regulations and will eventually force their officials to repeal the regulations. State and local governments must play the major role in such a program of alerting the public to the most economical and acceptable approach to keeping their families and properties dry and undamaged.

COMMENTS

by

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These brief comments will discuss the Corps of Engineers Responsibilities for Compilation and Dissemination of Information on Floods and Flood Damages. The authority for the Corps' interest in this subject is contained in the Flood Control Act of 1960, that is Public Law 86-645 Title II, Flood Control, Section 206. This section states as follows:

"(a) That, in recognition of the increasing use and development of the flood plains of the rivers of the United States and of the need for information on flood hazards to serve as a guide to such development, and as a basis for avoiding future flood hazards by regulation of use by States and municipalities, the Secretary of the Army, through the Chief of Engineers, Department of the Army, is hereby authorized to compile and disseminate information on floods and flood damages, including identification of areas subject to inundation by floods of various magnitudes and frequencies, and general criteria for guidance in the use of flood plain areas; and to provide engineering advice to local interests for their use in planning to ameliorate the flood hazard: Provided, that the necessary surveys and studies will be made and such information and advice will be provided for specific localities only upon the request of a State or a responsible local governmental agency and upon approval by the Chief of Engineers.

"(b) The Secretary of the Army is hereby authorized to allot, from any appropriations hereafter made for flood control, sums not to exceed \$1,000,000 in any one fiscal year for the compilation and dissemination of such information."

The two important features to remember are:

(1) This act authorized the Corps to provide very valuable information and guidance on flood plain problems, including flood problems due to hurricane tides.

(2) The State or local governmental agency must request the information and the Chief of Engineers must approve the study.

Now naturally it will be necessary to select the areas for study based on need because there is not sufficient money or manpower to study all areas at once or even the more critical areas all at once. Probably the most logical approach will be for the designated State agency to coordinate all the requests for study in the State and assign the desired priorities. This list of priorities should be based on the expected needs at least two years or more ahead and should be reviewed each year before 1 June. The Act sets a limit of \$1,000,000 in any one fiscal year on the nationwide expenditures for these studies. Therefore it will be necessary for the Chief of Engineers under his approval authority to adjust the priorities between the critical areas in the various States, taking due cognizance of the amount of yearly money available and the estimated cost of the various studies.

Now just a few words about the mechanics of administration. Letters of application for flood plain studies should originate with the local agencies and be forwarded through the State agency to the District Engineer. The District Engineer will be glad to assist the local agency in drafting the application so that it will have the required detail and scope. As you know, the Corps has District offices in just about each state, with the South Atlantic Division office located here in Atlanta. The District Offices are located at Wilmington, North Carolina, Charleston, South Carolina, Savannah, Georgia, Jacksonville, Florida, and Mobile, Alabama. Actually District boundaries follow the river basin divides so in some instances a state might be working with two Districts, as Georgia for instance would contact the Savannah District regarding the Savannah and Altamaha basins and the Mobile District for the Apalachicola-Chattahoochee-Flint Basin.

After an application for the study has been approved by the Chief of Engineers he will allot the necessary funds as soon as they are available. The District Engineer can then proceed with the study and preparation of the report.

So much for details of administration. Copies of the Engineering Manual which outlines in considerable detail the preparation and contents of the

reports are available through the respective District offices. Of course, if funds are not available for an immediate study of a flood plain area the District offices will be glad to furnish any available data from their files.

In conclusion, it is well to reemphasize that under this act it is possible for local communities to receive some very valuable data and guidance on Flood Plain problems from the Corps of Engineers. However, to get a study started it is necessary that a responsible local agency make the application through the designated coordinating agency of the State to the District Engineer.