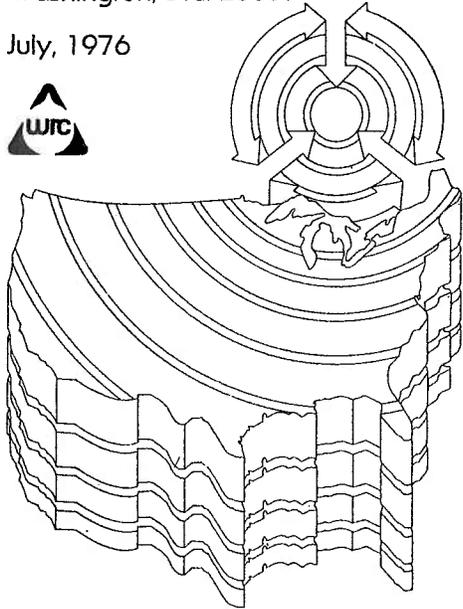


# A Unified National Program for Flood Plain Management

United States Water Resources Council  
2120 L Street, N.W.  
Washington, D.C. 20037

July, 1976





# UNITED STATES WATER RESOURCES COUNCIL

SUITE 800 • 2120 L STREET, N.W. WASHINGTON, D.C. 20037

JUL - 8 1976

Dear Mr. President:

In response to Section 1302(c) of the National Flood Insurance Act of 1968 (P. L. 90-448), I am pleased to commend to you for transmission to the Congress the report "A Unified National Program for Flood Plain Management." The report sets forth a conceptual framework and recommends Federal and State actions for a continuing unified program of planning and action at all levels of government to reduce flood losses through flood plain management. The report has benefited from the advice and suggestions of the Standing State Advisory Committee to the Water Resources Council and recognized authorities in the field of flood plain management. The Council has approved the report and adopted its recommendations.

Recommendations for cost sharing are not addressed in this report since they have been considered in the recently completed report transmitted to you pursuant to Section 80(c), the Water Resources Development Act of 1974 (P. L. 93-251).

In addition, I am pleased to commend to you a revision of Executive Order 11296--Flood Hazard Evaluation, updating the original Executive order to reflect recent legislation and to implement "A Unified National Program for Flood Plain Management" at the Federal level.

Respectfully,

Thomas S. Kleppe  
Chairman

The President  
The White House  
Washington, D. C. 20500

Enclosures

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MEMBERS: SECRETARIES OF INTERIOR, AGRICULTURE, ARMY, COMMERCE, HOUSING AND URBAN DEVELOPMENT, TRANSPORTATION; ADMINISTRATOR, ENVIRONMENTAL PROTECTION AGENCY; CHAIRMAN, FEDERAL POWER COMMISSION - OBSERVERS: ATTORNEY GENERAL; DIRECTOR, OFFICE OF MANAGEMENT AND BUDGET; CHAIRMEN, COUNCIL ON ENVIRONMENTAL QUALITY, TENNESSEE VALLEY AUTHORITY, RIVER BASIN COMMISSIONS, BASIN INTERAGENCY COMMITTEES.



## CHAPTER V

### HOUSE DOCUMENT 465 AND SUBSEQUENT PROGRESS

The purpose of this chapter is to review progress since the 1966 report of the Task Force on Federal Flood Control Policy was published as House Document 465.<sup>1/</sup> A brief summary of Federal flood plain management programs prior to 1966 is presented, followed by discussion of three landmark actions toward a coordinated approach - publication of House Document 465; passage of the National Flood Insurance Act, as amended, and associated legislation; and promulgation of the Water Resources Council's Principles and Standards for Planning Water and Related Land Resources.

#### A. Flood Control Programs prior to 1966

Congressional acceptance of Federal responsibility for flood control began in 1917 following major floods on the Mississippi River and subsequently expanded to nationwide scope and broadened to include hurricane flooding. Beginning with a series of "Flood Control Acts," the Corps of Engineers was assigned responsibility for flood control engineering works and later for flood plain information services. In the early 1930's, Congress created the Tennessee Valley Authority as a regional resource development agency, including flood control through the construction of dams and reservoirs among its duties. In the late 1930's, Congress expanded Bureau of Reclamation authority to build reservoirs for flood control purposes. In the 1940's, the Congress authorized the Department of Agriculture to construct 11 specific authorized projects for flood control, and in the 1950's a nationwide program was authorized for upstream watershed projects.

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<sup>1/</sup> Task Force on Federal Flood Control Policy. A Unified National Program for Managing Flood Losses, House Document 465, 89th Congress, 2nd Session, U.S. Government Printing Office, Washington, D. C., 1966.

Despite these programs and rapidly rising Federal expenditures for flood control, data indicated rapidly rising flood losses. Although the Tennessee Valley Authority had begun to combine zoning and subdivision regulations with engineering works in the 1950's and although the 1960 Flood Control Act authorized the Corps of Engineers to provide States and localities with information needed to regulate flood plain lands, Federal programs relied predominately on engineering works for modifying floods. Thus it was in its review of Federal programs that the Task Force on Federal Flood Control Policy urged a policy that emphasized modification of susceptibility to flooding and the impacts of flooding.

#### B. House Document 465 - The Foundation

The Presidential Task Force whose recommendations were reported in House Document 465, A Unified National Program for Managing Flood Losses, went a long way toward identifying problems and needs with regard to existing Federal programs and their impact at the State and local levels. The associated Executive Order 11296, issued in August 1966, directed that Federal agencies evaluate the flood hazard before funding construction of new buildings or purchase or disposal of lands. Because of these two documents, progress has been made in alleviating the hazards but other problems identified by the Task Force remain. Further, the Executive order has become dated by enactment of legislation such as the National Flood Insurance Act. These shortcomings were cited in the General Accounting Office report, "National Attempts To Reduce Losses From Floods By Planning For And Controlling The Uses Of Flood-Prone Lands," issued in March 1975.

The Task Force report suggested the need for new planning attitudes and a unified approach for flood plain management, but it stopped short of describing such a framework. Lack of a framework is judged at least partly responsible for the problems related to agency indecision and nonuniform Federal practices. Chapter III of this report attempts to lay out a conceptual framework. A summary of the findings and recommendations of House Document 465 is shown in Exhibit 1. Progress made on

I. SUMMARY OF FINDINGS AND RECOMMENDATIONS

The Nation needs a broader and more unified national program for managing flood losses. Flood protection has been immensely helpful in many parts of the country—and must be continued. Beyond this, additional tools and integrated policies are required to promote sound and economic development of the flood plains.

Despite substantial efforts, flood losses are mounting and uneconomic uses of the Nation's flood plains are inadvertently encouraged. The country is faced with a continuing sequence of losses, protection, and more losses. While flood protection of existing property should receive public support, supplemental measures should assure that future developments in the flood plains yield benefits in excess of their costs to the Nation. This would require a new set of initiatives by established Federal agencies with the aid of State agencies to stimulate and support sound planning at the local government and citizen level.

Statutory Federal policy dealing with cost sharing, land acquisition, and loan authority would need to be modified, but most of the measures would be taken by the Corps of Engineers, the Department of Agriculture, the Department of Housing and Urban Development, the Geological Survey, and the Environmental Science Services Administration under existing authority. Modest additional expenditures over the next 10 years and reorientation of Government effort would greatly reduce flood losses and demands for Federal relief.

The specific actions recommended by the task force may be summarized as follows:

Category of  
Progress

*To improve basic knowledge about flood hazard*

1. A three-stage program of delimiting hazards should be initiated by the Corps of Engineers, the Geological Survey, and other competent agencies.

B

2. A uniform technique of determining flood frequency should be developed by a panel of the Water Resources Council.

A

3. A new national program for collecting more useful flood damage data should be launched by the interested agencies, including a continuing record and special appraisals in census years.

C

(1) 4. Research on flood plain occupance and urban hydrology should be sponsored by the Department of Housing and Urban Development, the Department of Agriculture, and the Geological Survey.

(1)C

(2)B

*To coordinate and plan new developments on the flood plain*

5. The Federal Water Resources Council should specify criteria for using flood information and should encourage State agencies to deal with coordination of flood plain planning, and with flood plain regulation.

B

6. Under the following Federal programs steps should be taken to assure that State and local planning takes proper and consistent account of flood hazard: B
- Federal mortgage insurance
  - Comprehensive local planning assistance
  - Urban transport planning
  - Recreational open space and development planning
  - Urban open space acquisition
  - Urban renewal
  - Sewer and water facilities
- (Many of the necessary coordinating actions were accomplished during final preparation of this report.)
7. Action should be taken by the Office of Emergency Planning, the Small Business Administration, and the Treasury Department and other agencies to support consideration of relocation and floodproofing as alternatives to repetitive reconstruction. B
8. An Executive order should be issued directing Federal agencies to consider flood hazard in locating new Federal installations and in disposing of Federal land. A
- To provide technical services to managers of flood plain property*
9. Programs to collect, prepare, and disseminate information and to provide limited assistance and advice on alternate methods of reducing flood losses, including flood plain regulation and floodproofing, should be undertaken by the Corps of Engineers in close coordination with the Department of House and Urban Development, and the Department of Agriculture. A
10. An improved national system for flood forecasting should be developed by the Environmental Science Services Administration as part of a disaster warning service. B
- To move toward a practical national program for flood insurance*
11. A five-stage study of the feasibility of insurance under various conditions should be carried forward by the Department of Housing and Urban Development. A
- To adjust Federal flood control policy to sound criteria and changing needs*
12. Survey authorization procedure and instructions should be broadened in concept. A
13. Cost-sharing requirements for federally assisted projects should be modified to provide more suitable contributions by State and local groups. B
14. Flood project benefits should be reported in the future so as to distinguish protection of existing improvements from development of new property. A
15. Authority should be given by the Congress to include land acquisition as a part of flood control plans. B
16. Loan authority for local contributions to flood control projects should be broadened by the Congress. C

the recommendations is categorized as: (A) largely implemented, (B) some progress (often legislated but not implemented), and (C) little or nothing accomplished.

Implementation or progress toward implementation has been achieved on most of these recommendations, but three have had little or no followup, and two remain valid. Recommendation 3 calls for a national program to collect flood damage data but does not clearly specify responsibility. Recommendation 4. (1) calls for expanded research on flood plain occupancy. Recommendation 16 was rendered invalid by revenue sharing and block grant programs.

A direct response to several recommendations is found in the National Flood Insurance Act of 1968 (P. L. 90-448), as amended, and the closely related Flood Disaster Protection Act of 1973 (P. L. 93-234). The collective purpose of these acts is to check the trend toward increasing flood losses. A Federal-private industry insurance program is utilized ultimately to reduce the general taxpayer's burden for relief and the almost sole reliance upon protective works by pooling risks and distributing the burden more equitably. The acts emphasize local flood plain regulation to reduce flood losses.

C. The National Flood Insurance Program - A Regulatory Approach Focused on Long-Term Flood Loss Reduction

The National Flood Insurance Program applies to coastal and riverine flood plains and consists of two phases, emergency and regular programs. Emergency Program rates are subsidized. Regular Program rates are both subsidized and actuarial for residents in those communities which enact and enforce flood plain management and development measure consistent with program regulations.

As many as 22,000 communities could ultimately be enrolled in the National Flood Insurance Program. In Section 2(a) (5) of the Flood Disaster Protection Act of 1973 (P. L. 93-234), the Congress finds that "the Nation cannot afford the tragic losses of life caused annually by flood occurrences, nor the increasing losses of property suffered by flood victims, most of whom are

still inadequately compensated despite the provision of costly disaster relief benefits. "

Section 102(a) of the Act requires the purchase of flood insurance in communities where such insurance is available in connection with any form of Federal "financial assistance" for acquisition or construction located in identified special flood hazard areas (in effect, an FHA-insured or VA-guaranteed loan or a loan for acquisition of improved land for a mobile home, or for building construction [further defined in Section (3) (a) (4)] made by a federally insured bank, savings institution or credit union). Financial assistance is broadly defined as any form of loan, grant, guaranty, insurance, payment, rebate, subsidy, disaster assistance loan or grant, or any form of direct or indirect Federal assistance other than general or special revenue sharing or formula grants made to States. The construction referred to in this section is essentially confined to walled and roofed buildings affixed to a permanent site, including mobile homes.

Communities identified by the Secretary of Housing and Urban Development as flood-prone communities have a one year period in which to enroll in the National Flood Insurance Program or thereafter be denied both Federal financial assistance for acquisition or construction purposes and federally related financing by private lending institutions in identified flood hazard areas.

The provisions of Section 102 mandating the purchase of insurance and Section 202 requiring the participation of flood-prone communities apply only to the identified areas of special flood hazards in those communities. The same is true for the flood plain management measures required by Section 1305 (c) (2). In practice, however, insurance is available to all insurable structures within the entire community, and the flood plain management regulations apply to the areas of special flood hazard but may be applied to all flood plains in the community.

In effect, therefore, except for a few communities which chose to risk the denial of certain Federal financial assistance in the flood hazard areas and those whose flood problems have not yet

been called to HUD's attention, by the end of 1975, most of the Nation's flood-prone communities had been notified and requested to enroll in the National Flood Insurance Program with its mandatory requirements for effective flood plain regulation.

Although only minimal measures are at first required, they are more than most communities had required, and they are a start in the right direction. Once the definitive limits of the area which would be inundated by the 100-year flood and elevations for such a flood have been provided, the participating community must enact and enforce more specific measures to reduce the potential for flood losses. When floodway data are provided and risk zones identified on a flood insurance rate map, the community is required to enact floodway boundaries as encroachment limits, to restrict effectively any development in the floodway, and to regulate carefully development in special high hazard areas for which base flood elevations are provided. These flood plain management requirements are primarily regulatory, as opposed to structural, dealing as they do with land use, public facilities, flood proofing, and construction measures.

In addition, the insurance aspect of the program is a force for flood loss reduction in at least two ways:

1. Once the flood insurance ratemaking study has been prepared, actuarial rates for new construction should indicate to prospective builders and buyers the extent of the hazard that they face and by the cost of insurance discourage building in hazardous areas or at vulnerable elevations. Obviously rate levels can influence building and buying decisions.
2. The requirement that structures which have been substantially damaged, if rebuilt, must be floodproofed and can be insured only at full actuarial rates may discourage both the nonconforming uses of flood plains not otherwise forbidden by ordinance and the repair and reconstruction of structures exposed to flood damage.

Although implementation of the National Flood Insurance Act and related legislation is in an early stage, it is apparent that the rate of progress in defining flood-prone areas and risk zones for the 22,000 potentially eligible communities is crucial to program implementation. Delay in completion of flood insurance studies and the resultant delay of community participation in the Regular Program may permit continued development and building at flood-prone locations and the subsequent "grandfathering" of these high risk developments under subsidized insurance rates. In view of this critical dependence and a legislated 1983 target for completion of the program, all means of accelerating preparation of flood boundary and floodway maps and flood insurance rate maps need to be examined and adopted when appropriate.

D. Principles and Standards for Planning Water and Related Land Resources -- A Planning Approach Focused on Federal Participation in Water Resources Programs

Promulgated in late 1973, the Water Resources Council's Principles and Standards provide guiding principles, standards, and procedures for Federal participation in preparation of comprehensive plans and for formulation and evaluation of Federal and federally assisted water and related land resources programs, projects, and activities. The Principles and Standards were promulgated by the Council with the expectation that they would evolve and change in recognition of the dynamic state of water resource knowledge and methodology. The Principles and Standards designate two objectives (national economic development and environmental quality) against which plans must be formulated and four accounts (national economic development, environmental quality, regional economic development, and social well-being) against which adverse and beneficial effects must be displayed. Individual agency procedures provide detailed methods for application of the Principles and Standards. Most but not all of the major Federal agencies concerned with water resource programs have been developing implementation procedures for Council approval. Although procedural details reflect individual agency missions and sensitivity to local situations, application of the planning approach is becoming more consistent. However, attainment of complete consistency is unlikely because some agencies

are not covered by the Principles and Standards and in the case of the Environmental Protection Agency, Congressionally mandates regulatory standards take a different direction than the Principles and Standards.

Application of the Principles and Standards is a significant step toward consistent and critical evaluation of flood plain management measures, including proposals for costly public works investments like dams and levees. Further improvement in application may be expected after publication of the results from a study of the Principles and Standards and of cost sharing and discount rate policies as mandated by Section 80 of the 1974 Water Resources Development Act (P. L. 93-251). Once this review of the Principles and Standards is complete, it should be possible to develop better evaluation procedures for consistent and objective evaluation of proposals and alternatives.

Improvement in application of the Principles and Standards should also result from implementation of Section 73 of P. L. 93-251, which directs that nonstructural alternatives be considered in surveying, planning, or designing Federal flood protection projects and provides that non-Federal participation shall be comparable to the value of lands which would have been required of non-Federal interests for structural measures (up to a maximum of 20 percent of project cost). This recognition of non-Federal costs should encourage a more balanced evaluation of nonstructural and structural alternatives in the planning process. Similarly, implementation of the authority to purchase high risk, substantially damaged properties as provided under Section 1362 of the National Flood Insurance Act of 1968, as amended, can contribute to the appropriate consideration of nonstructural alternatives.

#### E. Significant Related Legislation

The National Environmental Policy Act (P. L. 91-190) has already appreciably affected flood plain management, and the Coastal Zone Management Act (P. L. 92-583), the Federal Water Pollution Control Act Amendments of 1972 (P. L. 92-500), and the Disaster Relief Act of 1974 (P. L. 93-288) have promise of further significant effects on flood plain management.

The National Environmental Policy Act establishes environmental quality as a national goal and requires preparation of environmental impact statements for proposed Federal projects and programs that may significantly affect the environment. As indicated above, environmental quality is a planning objective for water resource projects. Planning facilitates utilization of strategies for modifying susceptibility to flooding and the impacts of flooding. The requirement for an environmental impact statement forces consideration and public display of alternative actions. When flood plain lands are affected, then explicit consideration is to be given by established flood control agencies to actions other than the traditional engineering works used to modify flooding.

The Coastal Zone Management Act assists States to preserve, protect, develop, and restore coastal resources through a federally approved management program. To participate, each State must submit a plan detailing procedures for dealing with facilities of greater than local concern, including the siting of facilities such as powerplants and flood protection and warning facilities. Explicit definition is required for permissible land and water uses and the means of exercising State control over these uses. With all 30 eligible States participating in the Coastal Zone Management programs, the Nation's coastal flood hazard areas (including those of the Great Lakes) are being subject to State land and water use control procedures.

Section 404 of P. L. 92-500 augments and stimulates activity under the permit system (e. g., as traditionally carried out under Section 10, Rivers and Harbors Act, 1899) applying to any discharge of dredged or fill material in "waters of the United States." Although this has been most closely identified with dredge and fill materials, it also applies to docks, piers, bridges, sewer outfalls, water intakes, and the like if the discharge of dredged or fill material is involved in their construction. Except for bridges, which are now under Coast Guard jurisdiction for permits, the permitting process requires approval by both the State and the Corps of Engineers. Because "waters of the United States" includes most riverine and coastal waters and wetlands, the Act adds new dimensions to flood plain management.

In addition, Section 208 requires an areawide system for planning waste treatment facilities, and Section 209 calls for accelerating preparation of Level B basin plans under the Water Resources Planning Act; both these sections mandate planning coordination at and between levels of government on matters of vital concern to flood plain management.

The Disaster Relief Act of 1974 (P. L. 93-288), which deals with floods as well as other natural disaster, encourages development of disaster preparedness and assistance plans, calls for insurance against disaster losses, especially for public and private nonprofit facilities, and requires land use and construction practices to mitigate natural hazards. The concern of this act with disaster preparedness and prevention relates its planning emphasis to the regulatory approach in the insurance program.

The new land and water planning tools afforded by P. L. 92-583, P. L. 92-500, and P. L. 93-288 offer an opportunity to utilize Federal assistance to strengthen the role of the States, and they challenge the Federal and State governments to coordinate flood plain management activities. The National Environmental Policy Act has already improved the flood plain management decision-making process by requiring consideration of alternative actions for coping with flood risk.

#### F. Summary

House Document 465 made specific recommendations essential to achieving a unified national program of flood plain management. Subsequently, major strides have been made in the addition of the regulatory tools associated with flood insurance and disaster relief, the dredge and fill permit system, and State land and water use requirements of the Coastal Zone Management Act. Major strides in planning procedures have been made through the Water Resources Council's Principles and Standards at the national level, Section 209 (P. L. 92-500) provisions for River Basin Planning at the multistate level, the Coastal Zone Management Act at the State level, and Section 208 (P. L. 92-500) at the substate level. However, development of these tools and procedures has not been matched by operational

coordination of individual programs into a unified national program for flood plain management, as may be seen from the discussion of existing institutions and programs in Chapter VI.