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DEPARTMENT OF THE ARMY  
OFFICE OF THE ASSISTANT SECRETARY  
WASHINGTON, DC 20310

340-84

MEMORANDUM FOR THE CHIEF OF ENGINEERS

SUBJECT: Level of Protection for Urban Areas

We are fully committed to the support of Federal flood control projects where the required expenditures can be adequately justified. However, we have become increasingly concerned with the Corps' policy of recommending very high levels of flood protection (SPF if possible) for urban areas where national economic development (NED) plans would require lesser investments. Given the large Federal deficits and the budget constraints we will be experiencing for the foreseeable future, our policies must reflect the fact that fewer Federal dollars will be available for water resources projects and that high costs for some projects will mean delays or even indefinite deferral for others. The need for sound justification of expenditures which exceed national economic efficiency levels is even greater now than it always has been.

Formulation of flood damage reduction plans must follow the procedures contained in the Principles and Guidelines (P&G). The alternative plan with the greatest net economic benefit consistent with protecting the Nation's environment (the NED plan) is the plan to be recommended for Federal action unless an exception is made. Exceptions are to be granted by the agency head only when other Federal, State, local and international concerns provide overriding reasons for recommending another plan. Granting an exception is very difficult when the only justification is that the recommended plan provides an urban area with a "standard" high level of protection and there are few, if any, supporting details.

As a matter of general policy we concur in the desirability of achieving a certain minimum level of protection for urban areas. If the NED plan would leave significant portions of an urban area within the post-project 100-year floodplain and if the additional costs are not unreasonable, we will grant an exception for a proposal to increase the level of protection to 100 years when it can be adequately demonstrated that this will reduce non-Federal eligibility requirements for the National Flood Insurance Program (NFIP), particularly when 100-year protection has the potential to substantially reduce future subsidized reimbursements for insured flood losses.

The high level of urban flood protection specified in Corps guidelines is not realistic unless net benefits would be maximized or unless there are unusual circumstances. When, through the reporting process there has developed a consensus that the exception permitted by the P&G should be granted for a project which would provide greater than 100-year protection for an urban area, reference to impacts related to the NFIP will not be adequate to grant an exception. Examples of other conditions which, in combination, could be considered as reasons for recommending the granting of an exception are as follows:

- (1) Flood characteristics. Protection against recurrence of the flood of record, high velocity overbank flows, short warning times even with use of modern forecasting techniques and projected increases of watershed urbanization which will increase runoff in the future.
- (2) Characteristics of protected area. Uniqueness or special qualities of protected structures, e.g., historic structure, hospitals and public buildings essential to operation of local governments.
- (3) Concerns of others. Firm local development plans which must have a high level of protection and cannot be located out of the floodplain.

Moreover, where levees and floodwalls are proposed, other means of reducing risks should be thoroughly evaluated before recommending a level of protection above that afforded by the NED plan. These other means would include projects designed to (1) reduce the chance of total structural failure and the attendant sudden and high velocity flows in the event design flows are exceeded and (2) incorporate features which will reduce the hazard when the design flow is exceeded and overtopping without failure is experienced. Also, consideration must be given to nonstructural measures which can reduce the residual risk of a structural solution. State-of-the-art flood-warning and evacuation measures, flood insurance and

zoning are all measures which can be made a part of local cooperation requirements. These latter measures would be applicable to plans proposing channelization and storage as well as to levees and floodwalls.

The Corps' guidance on level of protection should be revised as soon as possible to reflect the above. Issuance of interim guidance may be necessary if the formal process will take some time to execute. I would like to review any changes before they are provided to the Corps' field offices.

(Signed)

William R. Gianelli  
Assistant Secretary of the Army  
(Civil Works)

cc: ~~SACW~~ (File, read, signer)  
SASG  
DD/vdm/27 Feb 84