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PHILADELPHIA DISTRICT, CORPS OF ENGINEERS
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PHILADELPHIA, PENNSYLVANIA 19106

IN REPLY REFER TO

DELAWARE RIVER BASIN STUDY
SURVEY REPORT

MAIN REPORT

AUGUST 1984

DELAWARE RIVER BASIN STUDY
MAIN REPORT

Table of Contents

Table of Contents (Continued)

List of Tables

List of Figures

List of Plates

Exhibits

List of Appendices

List of Supplemental Data

SYLLABUS

This survey report presents the results of the analysis of flooding along the main stem Delaware River. This analysis was authorized by Congress at the request of the Delaware River Basin Commission (DRBC) in response to the deferment of the Tocks Island Lake Project. This study examined flood damage reduction alternatives for the section of the Delaware River from Stroudsburg, Pennsylvania to Burlington, New Jersey, which would have received flood protection from the Tocks Island Lake Project.

The Madigan-Praeger Report, The Comprehensive Study of the Tocks Island Lake Project and Alternatives, served as a point of departure for the comprehensive analysis by this study of localized structural and nonstructural alternative measures for flood damage reduction along the main stem Delaware. The Madigan-Praeger Report determined that with a repetition of the flood of record in 1955, catastrophic losses would result despite the construction of some flood control facilities and some floodplain management programs established since 1955. It was concluded by the Madigan-Praeger Report that only a mix of nonstructural measures could be economically justified as an alternative to the Tocks Island Lake Project.

This survey investigation determined the potential for flood damage along the main stem Delaware River (Stroudsburg to Burlington) by first updating hydrologic and hydraulic data and conducting a comprehensive damage survey of all structures subject to flooding. All practicable localized structural and nonstructural flood damage reduction alternatives were then investigated.

This investigation concluded that local structural protective works could not be justified. This is because high zero damage elevations and the older, complex infrastructure that characterize the main stem result in high project costs relative to flood damages reduced.

Although 12 study area communities were identified as justified for nonstructural protection based on the survey-level analysis, only a small percentage (approximately 2%) of the total structures (approximately 12,000) subject to flooding along the main stem are justified for nonstructural application. In addition, these structures are widely distributed throughout those 12 communities. These could be pursued further under the Continuing Authorities Program if non-Federal sponsorship is available.

The investigation does confirm that there is the potential for a major disaster should there be an occurrence of an event equal to the 1955 flood. This should be addressed both directly and indirectly at the local level. In addition, direct action should be taken by all the main stem communities in strict enforcement of flood plain ordinances and codes and in the improvement and maintenance of flood warning and preparedness plans.

The Corps of Engineers could provide technical assistance, as requested, through the provision of data for floodplain management and aid in preparedness planning.

Indirect action should also be taken at the local level. This involves a flood consciousness in all decisions made in land use and urban planning. Individual communities can minimize potential flood problems by including the benefits of reducing or eliminating flood related problems in making long range decisions on growth, development, and associated public policy.