

UPPER PASSAIC RIVER AND TRIBUTARIES AT LONG HILL TOWNSHIP, NEW JERSEY

FLOOD DAMAGE REDUCTION AND ECOSYSTEM RESTORATION

INTEGRATED DETAILED PROJECT REPORT & ENVIRONMENTAL ASSESSMENT

1. INTRODUCTION

This integrated Detailed Project Report and Environmental Assessment (DPR/EA) investigates the feasibility of alternative plans to address problems and opportunities associated with flood damage reduction and ecosystem restoration along the Passaic River in Long Hill Township (Morris County), New Jersey. This DPR/EA has been prepared by the New York District of the U.S. Army Corps of Engineers (Corps) under the General Investigations Program of the Corps. The New Jersey Department of Environmental Protection (NJDEP) is the non-Federal partner for this study and for any subsequent project implementation.

1.1 Study Authority

The Upper Passaic River, New Jersey, Flood Control and Environmental Restoration Feasibility Study is being conducted under the Corps of Engineers General Investigations program. The study was authorized by a resolution of the Committee on Transportation and Infrastructure of the U.S. House of Representatives, adopted May 7, 1997. The resolution states that:

“Resolved by the Committee on Transportation and Infrastructure of the United States House of Representatives, That, the Secretary of the Army is requested to review the report of the Chief of Engineers on the Upper Passaic and Tributaries in Long Hill Township (formerly Passaic Township), Morris County, New Jersey, published as House Report Number 94-1702, and other pertinent reports, with a view to determining whether any modifications of the recommendations contained therein are advisable at the present time, in the interest of water resources development, including flood control, environmental restoration and other allied purposes.”

Under this study authorization, a reconnaissance report was completed in July 1998. The reconnaissance study concluded that there is Federal interest in addressing problems and opportunities of flood damage reduction and ecosystem restoration along the Passaic River at Long Hill Township. Based on preliminary analysis, the reconnaissance report identified at least one project that would be in the Federal interest. It recommended three flood damage reduction alternatives that appeared to have Federal interest : closure structures on culverts, road raising and embankment reconstruction, and implementation of a flood warning system (FWS). In addition, the report identified six potential mitigation/restoration sites for further evaluation of the Federal interest. On the basis of these findings, the Corps and the State of New Jersey entered into an agreement to perform a cost-shared feasibility study of the Upper Passaic and Tributaries in Long Hill Township.

1.2 *Study Purpose and Need

The purpose of the Passaic River at Long Hill Township study is to evaluate the feasibility of Federal participation in implementing solutions to problems and opportunities of flood damage reduction and ecosystem restoration along this waterway. More specifically, the study:

- Identifies problems associated with periodic flooding from storms along the Passaic River, particularly at Long Hill Township,
- Identifies opportunities for restoration of degraded ecosystems in the Passaic River basin,
- Evaluates the technical, economic, environmental, and institutional feasibility of Federal action to address flooding problems and ecosystem restoration opportunities, and
- Determines if there is local support for implementation of the recommended plan.

As part of the plan formulation process, reconnaissance phase plans were re-evaluated, and other potential flood damage reduction and ecosystem restoration measures were formulated in order to evaluate and select those plans that maximize contributions to National Economic Development (NED) and to National Ecosystem Restoration (NER). In this document, the NED plan and the NER plan have been developed to a level of engineering, economic, and environmental detail sufficient to proceed to the Preconstruction Engineering and Design (PED) phase, pending recommendation by the New York District, approval by the North Atlantic Division Commander, support by Corps Headquarters and the Assistant Secretary of the Army (Civil Works), and construction authorization by Congress.

1.3 Prior Studies, Reports, And Existing Water Projects

The Passaic River Basin is subject to frequent and severe flooding. As such, the Corps of Engineers has conducted numerous studies to identify comprehensive solutions to reduce flood damages throughout the basin. Each of the prior studies were reviewed to identify any and all information that could be used in the current feasibility study. However, with the exception of the reconnaissance study conducted prior to this feasibility investigation, none of the prior Corps studies address specific flooding problems in Long Hill Township.

Upper Passaic Flood Control and Ecosystem Restoration Reconnaissance Study, 1998.

This report concluded that structural and non-structural flood damage reduction measures appeared to warrant Federal interest along portions of the upper Passaic River and its tributaries. Three alternatives: closure structures on culverts, road raising and embankment reconstruction, and implementation of a flood warning system were recommended for further study in the feasibility phase.

Phase I General Design Memorandum Passaic River Basin, New Jersey and New York, Final Report on Flood Protection Feasibility Remaining Tributaries, January 1990.

The Water Resources Development Act of 1976 (Public Law 94-587) authorized the Passaic River Basin Study, a Phase I Advanced Engineering and Design Study. During the initial planning stage of the Passaic River Basin Study, the water resources related problems and

opportunities of tributary flood problem areas were identified and reviewed to determine the need for further study.

Passaic River Mainstem Feasibility Report, December 1987. A Feasibility Report and Environmental Impact Statement (EIS) for the Main Stem Passaic River was completed in December 1987 under the overall Phase 1 authority. The report recommendations were concurred in by the Board of engineers for Rivers and Harbors in July 1988 and by the Chief of Engineers in February 1989. The Assistant Secretary of the Army transmitted the report to the Office of Management and Budget for review in October 1989. The recommended plan consists of a 39 foot diameter, 13.5 mile long main tunnel; a 22 foot diameter, 1.2 mile long spur tunnel; 5.9 miles of channel modifications; 37.3 miles of levees and floodwalls, and preservation of 5,350 acres of flood storage. This plan would protect flood-prone areas along the Passaic, Pompton, Pequannock, Wanaque, Ramapo, Rockaway and Whippany Rivers and Deepavaal and Pinch Brooks. Preconstruction engineering and design was initiated in FY89 and was scheduled for completion in September 1995. The study of the enhancement of the Passaic River's Flood Emergency Preparedness System resulted in a recommendation to improve the timeliness, accuracy and reliability of flood warnings throughout the Basin. The recommended plan included the establishment of local self-help programs, increased rain and stream gage density and automation, flood warning, improved computer software and flood warning hardware facilities, and enhancement of local response programs. Installation was completed in 1988 and the project is now operational. The project is operated and maintained by the Corps through a contract with the National Weather Service.

Survey Report for the Passaic River Watershed, New Jersey, June 1972. The most recent survey report prepared by the Corps of Engineers was issued in June 1972 and amended by a supplemental report in April 1973. In these reports, the District Engineer recommended for authorization a plan of improvement for flood protection and allied resources development in the Passaic River Basin. Included in this recommendation were local protection plans. The alternatives presented in the 1969 draft report were updated and revised during detailed planning, and five alternative plans of improvement and six local protection projects were presented in the 1972 survey report. The recommended plan, Plan III, included a multipurpose reservoir at Two Bridges, with a conservation pool for water supply and water quality enhancement in the Great Piece Meadows, and a multiple-purpose reservoir with conservation storage for water supply at Myers Road. It also featured channel modifications along the Passaic, Pompton, Pequannock, Wanaque, and Ramapo Rivers. The 1972 report also recommended six local protection projects located on the Saddle River at Lodi, NJ; on the Ramapo River at Pompton Lakes and Oakland, NJ; on the Rockaway River at Denville, NJ; on Nakoma Brook at Sloatsburg, NY; on the Ramapo and Mahwah Rivers at Mahwah, NJ and Suffern, NY and on Molly Ann's Brook at Haledon.

Survey Report for the Passaic River Watershed, New Jersey, 1969. Seven new Basinwide plans were formulated and presented in a 1969 draft survey report. These plans included a reclamation plan, a flood detention plan, an intermediate conservation development plan, a maximum conservation development plan, a comprehensive reservoir-tunnel plan, a tunnel plan, and a local protection plan. The intermediate conservation development plan was tentatively recommended in the 1969 draft report. It included a multiple-purpose reservoir in the Passaic River above Two Bridges, with a conservation pool for water supply, hydropower production and pollution abatement. It also included

diversions of the Pompton River into the reservoir, and levees and floodwalls along the Pompton River and along the proposed diversion channel. The plan also included protection along the lower reaches of major tributaries within the backwater influence of the Passaic River from Two Bridges to the mouth and local protection measures in the tidal reach of the lower Passaic River against the tide of record.

Survey Report for the Passaic River Watershed, New Jersey, June 1962. In June 1962, the New York District Engineer submitted an updated and revised draft survey report recommending favorable action on an alternative plan of improvement for the Passaic River watershed.

Survey Report for the Passaic River Watershed, New Jersey, October 1948. In October 1948, the New York District Engineer submitted a survey report recommending the construction of a reservoir and channel modification as a project for flood control and other purposes within the Passaic River watershed, New Jersey.

Prior Studies by Others

Passaic River Supplemental Flood Hazard Studies and Mapping State of New Jersey Department of Environmental Protection (undated). This report provided the principal source of data used to estimate flood frequencies, depths, and flood plain boundaries in the reconnaissance phase.

1995 Master Plan, Long Hill Township, NJ (and accompanying reports). This update to the 1987 Master Plan is based on the results of 10 background reports on the community, including reports on Existing Land Use, Natural Resources, Area Planning Considerations, Planning Issues, and Housing. The document presents fundamental statements of township policy regarding future development of the community and includes text and maps which relate the policy statements to a physical design. It also presents the ways and means by which the plan proposals may be achieved.

Morris County Stormwater Management Technical Guide. This report provides technical assistance and guidance to individual municipalities in the preparation of stormwater control ordinances and stormwater management plans. The guide is also used as the evaluation document in the county approval process for municipal stormwater management plans and ordinances. Recommended approaches to stormwater management and nonpoint source pollution control are accompanied by guidance for the coordinated review of development projects by agencies with regulatory authority.

Data and mapping from the Flood Hazard Studies and Stormwater technical guide were reviewed in the initial stages of the hydrology and hydraulic analyses conducted as part of this feasibility study. In addition, Long Hill Township's Master Plan was continually referenced as part of plan formulation activities to ensure that flood damage and ecosystem restoration alternatives considered were consistent with the township's land use regulations and long-term strategy for managing growth.

1.4 Study Scope

This DPR/EA investigates the feasibility of Federal action to address flooding problems and ecosystem restoration opportunities along the Passaic River at Long Hill Township, New Jersey.

It is consistent with Federal water resources policies and practices, including *Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies* (P&G, 1983), the Corps *Planning Guidance Notebook* (ER-1105-2-100, 22 April 2000), and *Procedures for Implementing NEPA* (ER 200-2-2, 4 March 1988). Throughout this investigation, the Corps is working closely with the non-Federal project partner, NJDEP, to (1) describe the range of potential Federal participation in flood damage reduction and ecosystem restoration along the Passaic River at Long Hill Township and (2) explain the roles and responsibilities of the Corps and the non-Federal partner in project planning and implementation.

As an integrated report, this DPR/EA also fully complies with requirements of the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S.C. 4321 et seq.). The integration of the NEPA documentation with the feasibility report is consistent with NEPA guidance to combine required documents with other documents, when practicable.

1.5 National Environmental Policy Act Requirements

Unlike other single-topic environmental laws (e.g., Clean Air Act, or Clean Water Act), the National Environmental Policy Act (NEPA) encourages protection of all aspects of the environment. The President's Council on Environmental Quality (CEQ) has pointed out that "NEPA is distinguishable, purposefully so, from other environmental statutes. It targets no specific pollution sources or human health risks for treatment, prescribes formulation of no abatement techniques or remedial actions, and establishes neither milestones nor timetables for achieving its goals" (CEQ, 1990). Instead, NEPA requires that agencies take a systematic, interdisciplinary approach to agency decision making that will ensure the integrated use of the natural sciences, social sciences, and design arts.

An Environmental Assessment (EA) is a concise public document prepared by the federal agency to determine whether the proposed action has the potential to cause significant environmental effects (40 CFR 1508.9(a)). The purposes of an EA are to:

- Provide evidence and analysis sufficient to determine whether an EIS is required;
- Aid a federal agency's compliance with NEPA when no EIS is necessary,
- Facilitate preparation of an EIS when one is necessary, and
- Serve as the basis to justify a finding of no significant impact (FONSI).

The CEQ NEPA regulations (40 CFR 1500-1508) do not contain a detailed discussion regarding the format and content of an EA. However, the EA must discuss:

- The need for the proposed action,
- The proposed action and alternatives,
- The probable environmental impacts of the proposed action and alternatives, and
- The agencies and persons consulted during preparation of the EA.

NEPA requires federal agencies to integrate the environmental review into their planning and decision-making process. This integrated DPR/EA is consistent with NEPA statutory requirements. The report reflects an integrated planning process, which maximizes beneficial impacts on the environment resulting from ecosystem restoration and avoids, minimizes, and mitigates adverse project effects associated with flood damage reduction actions.

1.5.1 Areas of Controversy

At this time, there are no known major areas of controversy regarding the study and selected plan among agencies or the public interest.

1.5.2 Unresolved Issues

At this time, there are no known unresolved issues regarding the study and the selected plan.

1.6 Study Process

The New York District is responsible for conducting the overall feasibility study in cooperation with the non-Federal project partner, NJDEP. The feasibility study and eventual implementation of the project continue to receive strong support from NJDEP and from local governments, including Long Hill Township. Both Long Hill Township and NJDEP are committed to working with the Corps to address flooding problems and opportunities for ecosystem restoration along the Passaic River.

As will be explained in detail in this document, plan formulation for ecosystem restoration and for mitigation of adverse effects of flood damage reduction features of this project were conducted in close coordination with Federal and State of New Jersey regulatory and resource agencies, including: U.S. Fish and Wildlife Service, National Marine Fisheries Service, and NJDEP.

1.7 Report Organization

This document has been organized in a manner consistent with both Corps requirements for feasibility reports and with NEPA requirements. This report reflects an integrated planning process where positive environmental effects associated with restoration actions have been maximized and adverse environmental effects associated with flood damage reduction have been avoided, minimized, and compensated for.

The main report summarizes the results of feasibility studies and contains sections appropriate for EA documentation. Technical appendices, which present details of technical investigations conducted during the feasibility study, are attached. Some section headings are marked with an asterisk to indicate consistency with requirements of feasibility studies and NEPA documents.