Appendix 6

Corps of Engineers Report (selected portions)

The work of the U.S. Army Corps of Engineers in New Hampshire 1989

Same article was in 1991 Report

This booklet presents a brief description of water resource projects completed by the U.S. Army Corps of Engineers in New Hampshire. It describes the role of the Corps in planning and building water resource improvements and explains the procedure leading to the authorization of such projects.

For ease of reference, the material is arranged according to the type of project, i.e. flood damage reduction, navigation, or shore and bank protection. There is also a reference at the end of the booklet that lists Corps' projects by community. A map showing the location of all Corps' projects in the state is provided on the next page.

The Corps of Engineers water resources development program exerts a significant impact on New Hampshire's physical, economic, and social environment. This publication affords citizens the opportunity to learn about the various projects and to determine how they can participate in decisions regarding present and future activities.

For further information, call the Corps of Engineers at 617-647-8777, or write:

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US Army Corps of Engineers
New England Division

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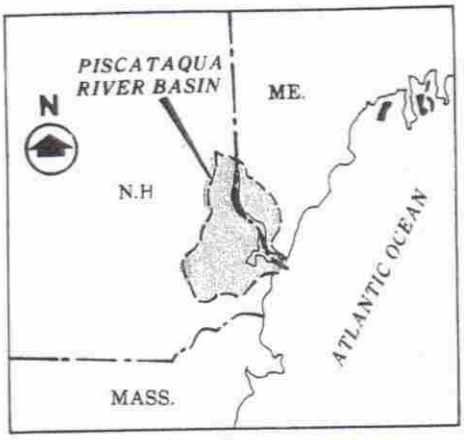
Piscataqua River Basin

The Piscataqua River Basin lies mostly in southeastern New Hampshire, with a portion lying at the southern tip of Maine. Of the basin's total area of 1022 square miles, 776 square miles (76 percent) lie in New Hampshire and 246 square miles (24 percent) lie in Maine. The Piscataqua River and its largest tributary, the Salmon Falls River, form a partial border between New Hampshire and Maine.

The Piscataqua River Basin has a maximum length of 48 miles and a maximum width of 35 miles. In New Hampshire, it occupies the southeastern corner of Carroll County, most of Strafford County, and the northern two-thirds of Rockingham County.



LEGEND

■ LOCAL PROTECTION PROJECT

SCALE IN MILES
0 4 8

Cocheco River, Farmington

Location:

The Cocheco River Local Protection Project in Farmington is located along the Cocheco River.

Purpose:

The entire project protects about 45 acres of industrial, commercial, and resident property in the center of Farmington. Since its completion, it has prevented an estimat $110,000 in flood damages.

History:

The limited channel capacity of the Cocheco River frequently caused the river to overflow, resulting in flood damage to the center of Farmington. The town suffered seri ous flood damage in March 1936 and May 1954. This limited channel capacity was agg vated by periodic ice jams. Cakes of ice that had lodged against obstructions in the rive such as debris and several small wooded sand bars and islands, plagued Farmington f many years and was the cause of most of the area's flooding.

To increase the channel capacity of the Cocheco River, the Corps built a project on the upper part of river between the Central Street Bridge and the South Main Street Bridge. The work, constructed as a small project under Section 205 of the Continuing Authorities Program, was completed between June-November 1956 and cost $87,500. The project was turned over to Farmington for operation and maintenance.

In January 1957, however, ice cakes, flowing from the upper part of the Cocheco River between the Central Street and South Main Street Bridges to the lower part of the river, below the South Main Street Bridge, lodged in the vicinity of Dames Brook, locate about 2000 feet below the South Main Street Bridge. The river overflowed and caused considerable flood damage to one of Farmington's major industrial employers. Town off cials, businessmen, and manufacturers, weary of the periodic ice jams that continually jeopardized their community, approached the Corps and emphasized the importance o project that would extend to the lower part of the Cocheco River the same degree of pro tection afforded to the upper river by the existing project. The Corps responded by con- structing a project on the lower river between June-November 1959 at a cost of $48,600 This work was also constructed as a small project under Section 205 of the Continuing Authorities Program, and was turned over to Farmington for operation and maintenance

Description:

The entire project extends along a 7800-foot-long stretch of the Cocheco River. It begins at the Central Street Bridge and ends at a point 4700 feet downstream of the South Main Street Bridge.

Work completed on the upper part of the river centered mostly on the approximate 3100 feet of river between the Central Street and South Main Street Bridges. It involved:

—Constructing about 3000 feet of earthfill dike along the left bank of the river. The dike, constructed of materials excavated from the channel, begins at point about 200 feet downstream of the Central Street Bridge and ends at the South Main Street Bridge.
—Constructing approximately 125 feet of concrete floodwall, 10-12 feet high, alonç the left bank of the river. The wall extends from the existing masonry wall at the Central Street Bridge to the beginning of the earthfill dike.
—Constructing a concrete cap on the existing masonry wall to give the wall addi- tional height, thereby providing an extra measure of flood protection.
—Enlarging and straightening about 3100 feet of the Cocheco River.
—Straightening about 600 feet of the Mad River at its confluence with the Cochecc River.
—Removing an abandoned wooden dam. 83.01?
—Clearing and snagging about 2000 feet of the Cocheco River. This work extendec from the South Main Street Bridge to the mouth of Dames Brook.

The Cocheco River Local Protection Project extends along 7800 feet of the Cocheco River and is divided into upper and lower halves by the South Main Street Bridge (center). This photo shows the entire project as it winds through Farmington.

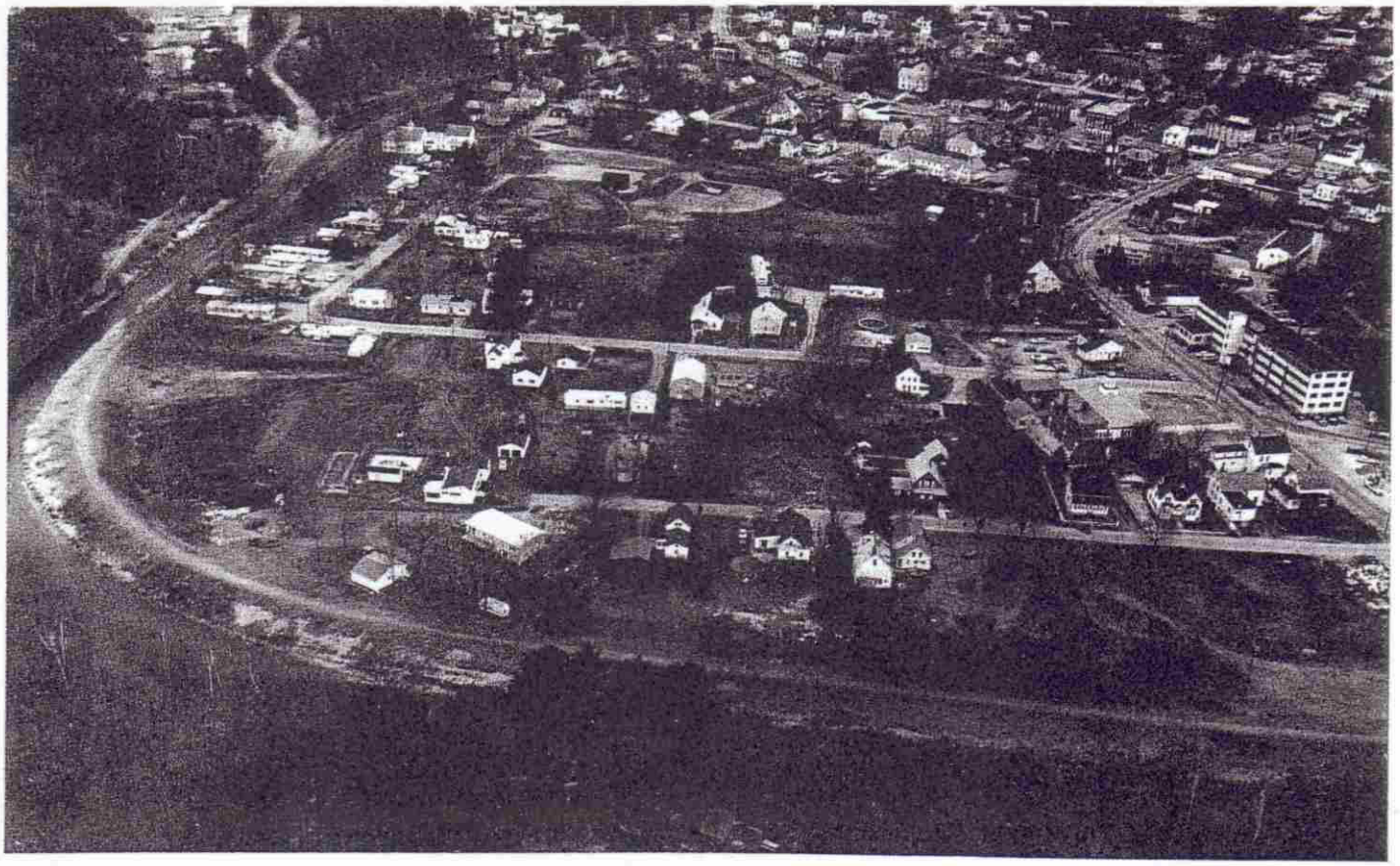
Work completed on the lower part of the river, below the South Main Street Bridge, involved:

—Widening and deepening about 4000 feet of the Cocheco River, beginning at the South Main Street Bridge and extending downstream.
—Snagging and clearing an additional 700 feet of the Cocheco River, beginning at the point where the aforementioned widening and deepening ended.
—Constructing 200 feet of earthfill dike with stone slope protection along the left bank, just downstream of the bridge. This dike was constructed of materials excavated from the channel.
—Straightening and widening the lower end of Dames Brook, from the Elm Street Bridge to its confluence with the Cocheco River.

Additional Information:

In the early 1960's, the project suffered significant flood damage. Consequently, the Corps repaired and restored the project between September-December 1964. This work included widening and reshaping the channel; constructing stone slope protection at areas subject to severe erosion; and constructing a deflecting stone groin at the confluence of the Mad and Cocheco Rivers. The work was completed as a small project under Section 205 of the Continuing Authorities Program and cost $47,000.

In April 1984, heavy flooding significantly eroded two sections of the 3000-foot-long dike on the upper part of the river. Emergency repairs included placing stone slope protection along these eroded areas and repairing a drain pipe. This work, constructed under the Corps' emergency repairs authority (Public Law 99 of the Flood Control Act of 1941), was accomplished between September-October 1985 and cost $137,000.



The upper half of the project begins near the confluence of the Mad and Cocheco Rivers (top left) and involved constructing 3000 feet of dike along the left bank of the river, and enlarging and straightening about 3100 feet of the river channel.

The lower half of the Cocheco River Local Protection Project included widening and deepening 4000 feet of the river, beginning at the South Main Street Bridge (lower right).