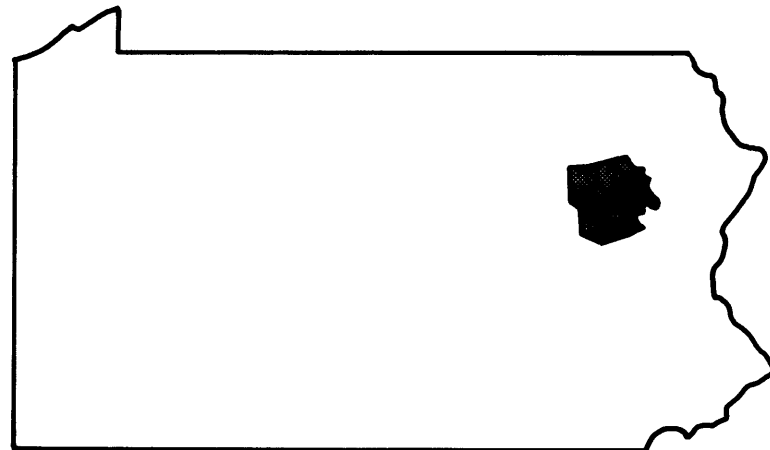


# FLOOD INSURANCE STUDY



**CITY OF  
WILKES-BARRE,  
PENNSYLVANIA  
LUZERNE COUNTY**



REVISED:  
MARCH 16, 1992



**Federal Emergency Management Agency**

COMMUNITY NUMBER - 420631

One hundred-year frequency floodwaters from the Susquehanna River are contained by floodwalls and levees and are restricted to undeveloped areas adjacent to the river channel. Mill Creek and its tributary, Laurel Run, create a 100-year floodplain area in the northeastern part of the city that varies from narrow upstream corridors to an expanded area at the mouth of Laurel Run. The 100-year floodplain of Solomon Creek includes a varying width stream-edge corridor, as well as an extensive ponding area within the western portion of the city. All types of land use are located within these 100-year floodplains.

The climate of the city is generally humid continental, but is modified by the effects of the Atlantic Ocean and Gulf of Mexico. The average summer and winter temperatures are 70 degrees Fahrenheit (<sup>o</sup>F) and 24<sup>o</sup>F, respectively. The average precipitation is 43 inches, which is uniformly distributed throughout the year (References 1 and 2). The greatest 24-hour rainfall occurred between September 29 and 30, 1924, when 5.09 inches fell in the area (Reference 3).

### 2.3 Principal Flood Problems

Historic data and information from this study demonstrate that the Susquehanna River, Solomon Creek, Mill Creek, and Laurel Run are primary sources of flood problems within the city. Major floods causing extensive property damage occurred in the area in 1865, 1902, 1904, 1936, 1940, 1946, 1960, and 1970 (Reference 4).

### 2.4 Flood Protection Measures

A local flood protection project consisting of walls and earthen levees along the Susquehanna River reduces the flood hazards to the city from the Susquehanna River. Walls and earthen levees along Mill Creek and Laurel Run reduce the flood hazard to the Brookside area of the city. FEMA specifies that all levees must have a minimum of 3-foot freeboard against 100-year flooding to be considered a safe flood protection structure. The levees in the city meet standard FEMA requirements. Five upstream dams contribute to the reduction of flood hazards from the Susquehanna River. These include Arkport Dam on the Canisteo River; Almond Lake on Canacadea Creek; Whitney Point Lake on the Otselic River; East Sidney Lake on Ouleout Creek; and Stillwater Lake on the Lackawanna River.

## 3.0 ENGINEERING METHODS

For the flooding sources studied in detail in the community, standard hydrologic and hydraulic study methods were used to determine the flood hazard data required for this study. Flood events of a magnitude which