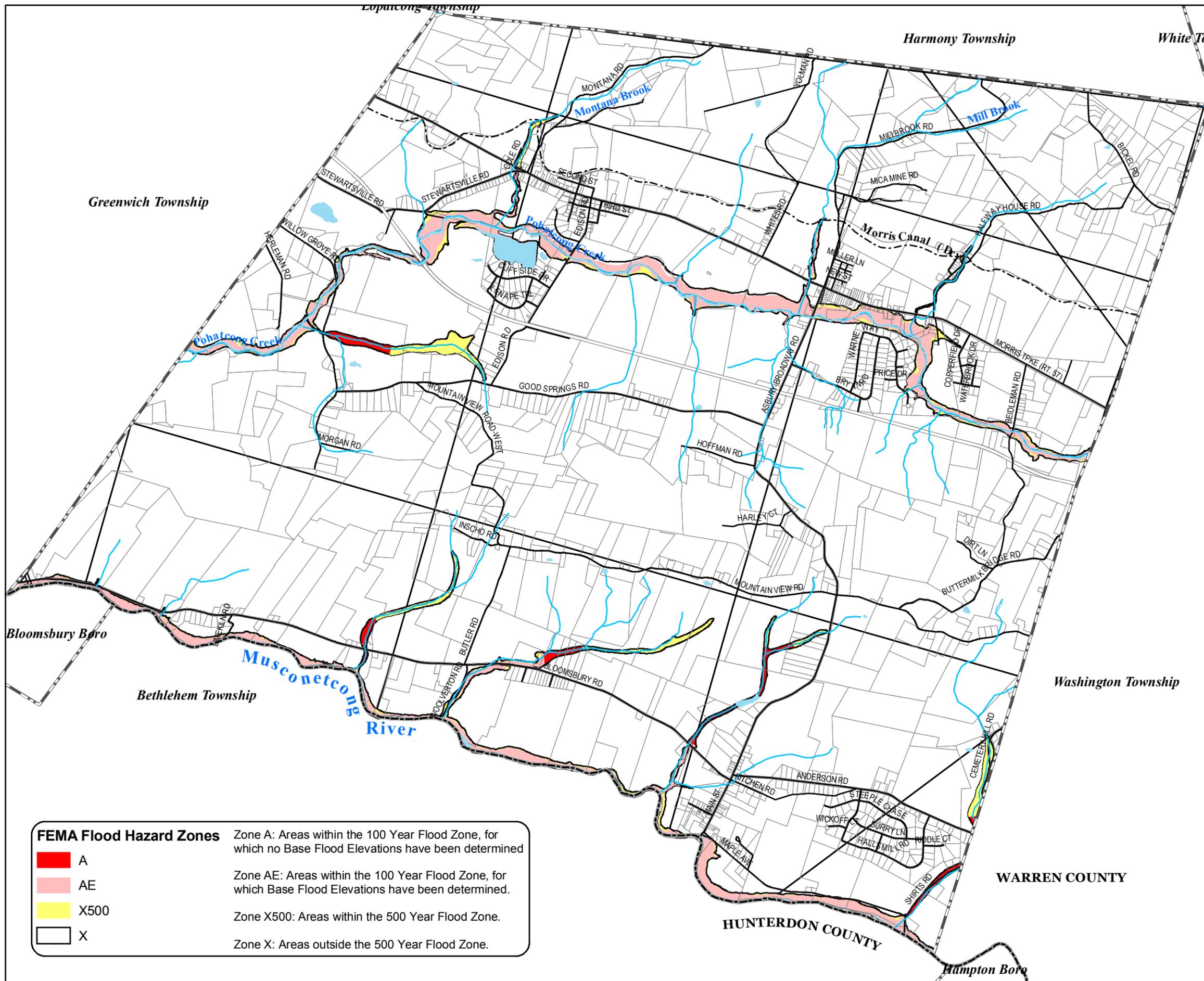


12: FEMA FLOOD HAZARD ZONES

A floodplain is the relatively flat area adjoining the channel of a natural stream which has been or may be covered by water. Floodplains are integral parts of the hydrologic cycle of a region for two key reasons. First, floodplains temporarily store floodwaters. During intense precipitation events and periods of high water, floodplains store excess runoff which is then slowly released. This storage capacity slows floodwater velocity and increases the ability of the river channel to discharge floodwater. The second important function of floodplains is the improvement of water quality. As stormwater runoff traverses the floodplain, established vegetation improves water quality by trapping sediments and pollutants before they enter the receiving water. Conversely, floodplains also store excess sediments which are deposited during flooding events. This deposition of nutrient rich sediments in floodplains has historically made farming of these areas attractive. Vegetation along the stream bank also anchors and stabilizes the soils, effectively reducing erosion and providing shade to maintain water temperatures. Floodplains are equally important as wildlife habitat for many rare species, and serve as nursery areas for many fish species.

The source data for the accompanying Figure was obtained from the Federal Emergency Management Agency (FEMA). Two standard flood zones commonly used to describe flood events are the 100-year and 500-year flood zone. The term “100-year flood zone is also known as the Special Flood Hazard Area. Characterization of flood zones is based upon flooding probability. Thus, a 100-year flood is described as a flood elevation that has a 1% chance of being equaled or exceeded each year. The Base Flood Elevation (BFE) is the height of the 100-year flood, or base flood, referenced to a controlled, vertical scale. The 100-year flood zone can be calculated using the BFE obtained from detailed area-specific hydraulic analyses. Conversely, the 100-year flood zone can be established without a BFE in less well-studied areas through approximations modeled on area topography. Terminology describing flood events in defined periods is misleading because these flood zones are based on exceedance probabilities not periodicity. Therefore, 100-year flood events may occur closely together within the space of a single year or on time scales greater than 100 years.

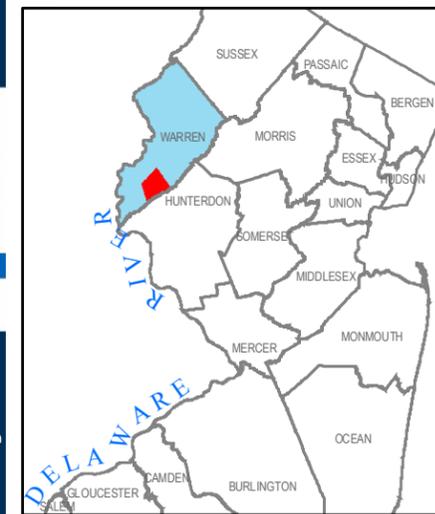
While floodplains may be aesthetically pleasing because of the proximity to water, these areas are not recommended for development. Development within floodplains alters storage capacity and flow characteristics elsewhere in the drainage system. While only 4.3% of Franklin Township lies within described FEMA flood zones, municipal officials should still address issues concerning floodplain management ([Figure 11](#)). In part this may be attributed to relatively steep slopes that confine floodplains to small areas. However, flood zones may probably be underestimated because smaller headwater tributaries may not be mapped. In addition, 500-year flood zones have not been established for most streams.



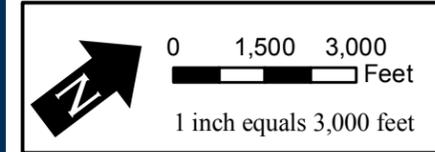
FEMA Flood Hazard Zones

	A	Zone A: Areas within the 100 Year Flood Zone, for which no Base Flood Elevations have been determined
	AE	Zone AE: Areas within the 100 Year Flood Zone, for which Base Flood Elevations have been determined.
	X500	Zone X500: Areas within the 500 Year Flood Zone.
	X	Zone X: Areas outside the 500 Year Flood Zone.

NEW JERSEY COUNTY MAP



PRINCETON HYDRO, LLC.
1108 OLD YORK ROAD, SUITE 1
RINGOES, NEW JERSEY, 08551



- SOURCES:
1. Parcel, roads and the Franklin Township Boundary data obtained from Warren County Planning Dept. "This map was developed using the Warren County New Jersey, Geographic Information System digital data, but this secondary product has not been verified by Warren County and is not county-authorized."
 2. Surface water data obtained from the NJDEP, Division of GIS.
 3. FEMA Q3 Flood Hazard data created by FEMA and obtained from the NJDEP, Division of GIS.

**FIGURE 11
FEMA FLOOD HAZARD ZONES**

NATURAL RESOURCE INVENTORY
FRANKLIN TOWNSHIP
WARREN COUNTY, NEW JERSEY

Legend

-  County Boundary
-  Municipal Boundaries
-  Ponds/Lakes
- Streams**
-  Streams
-  Morris Canal (Dry)
-  Roads
-  Parcels

